PRINTING EQUIPMENT

Craftsmen Plan an Elegant Graphic Arts Book (SEE PAGE 5)

Problems of the Printer Entering Offset Field

Technological Influences Unfolded for Craftsmen

ROP Color Series Concluded in this Issue

Please Pass On To:

THE INDUSTRY-WIDE TECHNICAL PUBLICATION

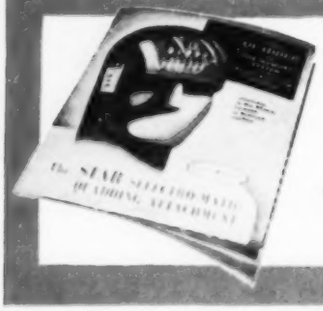
EXTRAS
on the Star Quadder at NO EXTRA COST!

All Star Selectro-Matic Quadders are equipped with push button controls as STANDARD EQUIPMENT—not as deluxe extras.

The push button controls, located conveniently at the right of the keyboard, make it simple to select a quadder operation—right flush, center or left flush. The operator's attention is never diverted from copy or keyboard.

A Pump-Stop signal, located on the control box, indicates when current is flowing through the Electro Pump Stop and a second signal lets operator know when a line is being cast. Any line can be "killed" before casting by a snap switch on the control box.

These are but a few of the many exclusive and outstanding features that make the Star Selectro-Matic Quadder superior to others for your composing room. Want to know more? Write for literature.



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For More Information Circle 167 on Reader Service Card

DAILY NEWSPAPER COLOR

can be produced more profitably, in less overall working time, when you whip the all-important problem of REGISTER at its source—in the stereotype mats, before press plates are cast. STA-HI has the precision equipment designed especially to do this job: the Master Matcher, Master Trimmer and Vacuum Flat Former.

We'll gladly send details at your request.

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For More Information Circle 165 on Reader Service Card

SCOTT Equipment modernizes the plant of the HOLLYWOOD, CAL. Citizen-News

4 SCOTT Press Units

4 SCOTT Reels, Tensions and Pasters

1 Pair SCOTT 3-2 Folders

Double Upper Former

Reversible Color Couple

View in Pressroom of Hollywood Citizen News

Many other publishers like SCOTT equipment too!

A compact, efficient installation by Scott for a busy, fast-growing Newspaper. Featuring simplicity of design, ease of adjustment and lower maintenance.

Send for literature

WALTER SCOTT & CO.

DIVISION OF WOOD NEWSPAPER MACHINERY CORPORATION Plant: Plainfield, N. J.

EXECUTIVE & SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, NEW YORK

For More Information Circle 156 on Reader Service Card

HAVE YOU EVER WONDERED WHAT PRINTABILITY IS?

Printability covers a multitude of things, each of them contributing to the faithfulness of the printing reproduction.

First you want smoothness. This applies to the surface. It is a matter of expert papermaking and coating to keep the pits and microscopic holes out of the sheet so that all parts of the printing plate will print.

Next you want levelness. This means that all parts of the sheet are the same caliper and that a printing plate applies equal pressures on all areas.

A smooth, level sheet of paper gives good coverage with a minimum amount of ink, and, if the paper has what is called good ink acceptance, the ink will not spread around the printing area, and halftone dots are not ragged.

Then a printable paper must have cushion. That means it must have enough resilience to take the pressure of the printing plate, and on release return to its original condition. All these factors, smoothness, levelness, good ink receptivity, cushion, influence the amount of time you spend on makeready. The less makeready, the sooner you get rolling, the less money spent on idle presses.

The more you learn about it, the more you realize that there's more to paper than meets the eye. You can rely on an expert papermaker such as Mead for thorough research into all these factors. We weigh them, then incorporate them in their due proportions so as to assure you the most satisfactory performance and most profitable, trouble-free press runs. Whether it's paper for letterpress, offset or gravure printing, you can get it *all* from Mead, Papermakers to America.

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MEAD papers

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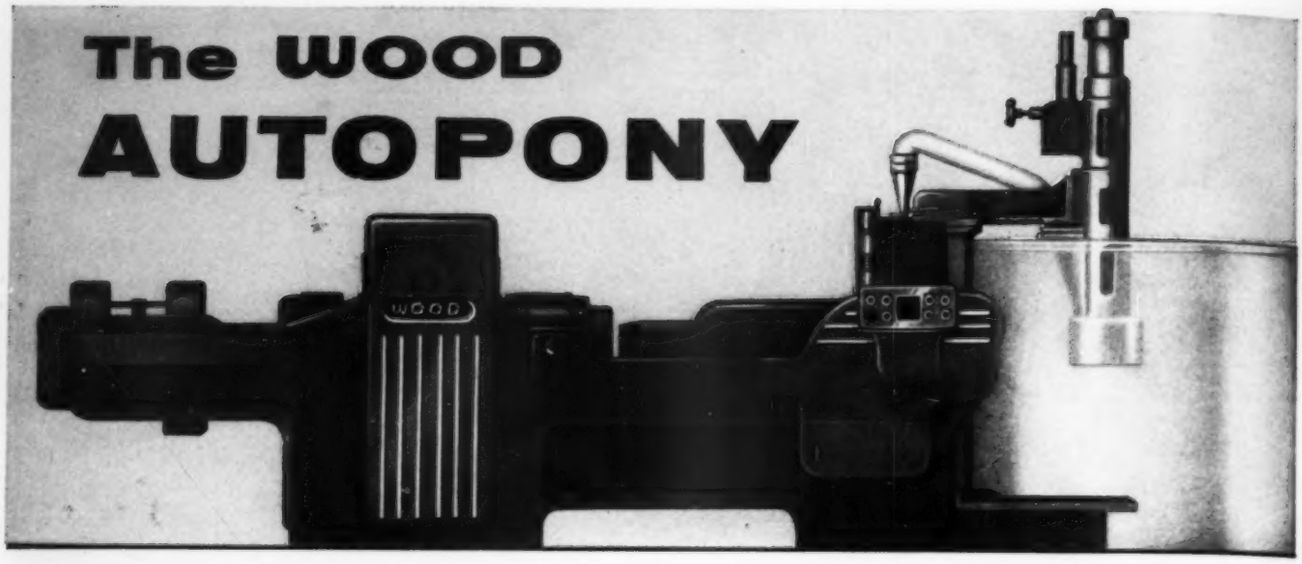
The WOOD AUTOPONY



An Improved Method of Producing Stereotype Plates AUTOMATICALLY!

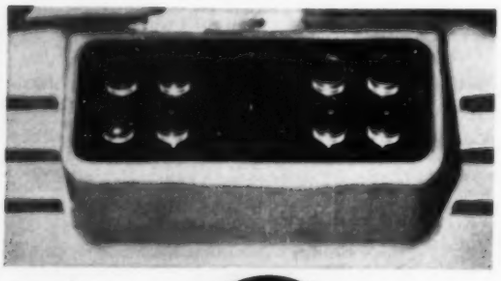
MAT POSITIONING . . .

Casting box tilts back toward operator approximately 20°. Mat sets into clips more easily and faster. Tilting operation controlled by push button. With mat and pouring sheet locked in casting box, control buttons return box to vertical position, ready to start casting cycle.

By streamlining the horizontal operation of plate making, the WOOD AUTOPONY casts, shaves and cools, AUTOMATICALLY, at the rate of 2½ plates per minute. All features of other famous WOOD Pony Autoplates have been retained with added improvements that assure "Better Stereotype Plates", F-A-S-T-E-R! For Tensionplate lockup, plates may also be moved into the Automiller without manual lifting.

CASTING CYCLE . . .

When starting button is pushed it engages an inter-lock which prevents accidental operation of casting box tilting mechanism—starting button activates automatic casting cycle.



CONTROL PANEL . . .

Puts streamlined plate making at your finger tips—Starting button activates automatic casting, shaving, cooling. Timer automatically controls number of plates desired. Machine shuts off when correct number of plates have been cast.

Send for descriptive literature.

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • Executive & Sales Office: 501 Fifth Avenue, New York 17, N.Y.

MAKERS OF PRESSROOM, REELROOM AND STEREOTYPE EQUIPMENT FOR A CENTURY

For More Information Circle 190 on Reader Service Card

SEPTEMBER 1957
VOL. 87, NO. 12

PRINTING EQUIPMENT *Engineer*

THE INDUSTRY-WIDE TECHNICAL PUBLICATION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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PRINTING EQUIPMENT Engineer, published monthly at 1276 West Third St., Cleveland 13, Ohio. ©1957 by Willsea Publishing Co.

Subscription rates in United States: One year, $4.50; two years, $8.00; three years, $10.00. Canada and U. S. Possessions: One year, $5.50; two years, $8.50; three years, $11.00. All other countries: One year, $10.00; two years, $16.00; three years, $20.00, in advance. Single current issues, 50c; back issues, 75c. December Equipment and Supplies Catalog Issue, $2.50 in United States; $3.50 outside United States. Canadian printing plant mechanical and production executives receiving Printing Equipment Engineer under BPA regulations will be charged $1 per year in advance to cover additional postage to Canada. All foreign subscriptions payable in U.S. funds.

Member Publications BPA Business Audit

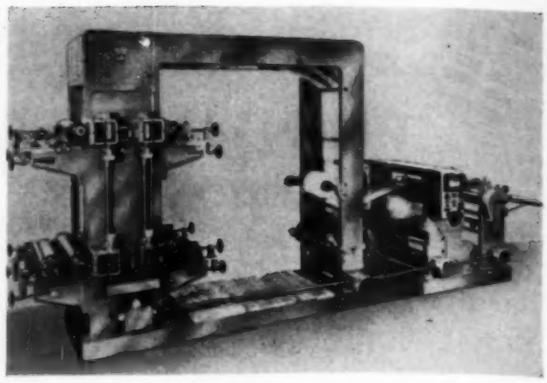
Accepted as Controlled Circulation Publication at Cleveland, Ohio.

OUR COVER: These officers of the Intl. Assoc. of Printing House Craftsmen, members of amplified committee, are discussing ambitious undertaking. Pre-planned for 1959 publication is intended to be one of the most beautiful books ever printed. Left to right are J. Homer Winkler, Ferd Voiland, Howard N. King and George Wise. All except Voiland (current Intl. president) are Intl. past presidents. King is committee chairman. The book will be written for general public by competent board of editors and will consist of a mid-century review of Graphic Arts progress, including 50 years of Craftsmanship. It will be printed by all major processes, will be beautifully illustrated and elegantly bound.

Equipment & Supplies

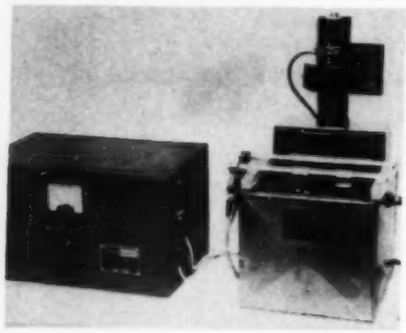
If you wish additional information concerning equipment, supplies, and/or technical literature, please make your request on *Printing Equipment Engineer's* Reader Service Card found in this issue.

Flexo Printer-Bagmaker Combination—Parsons & Whittemore Graphic Corp. has been appointed U. S. distributor for the Kleina-Rotoplast combination multicolor flexographic press and bagmaker, manufactured by the Bielloni Co., Milan, Italy. Kleina press prints paper, cellophane, polyethylene and other flexible materials in two, three or four colors at speeds up to 325 f.p.m. It is made in three widths: 15¾ in., 17⅝ in. and 19⅝ in., and repeat range is from 9½ in. to 31½ in. Rotoplast bag machine, made in widths of 11 13/16 in. and 19⅝ in., is automatic roll-fed unit equipped to cut and heatseal either flat or gusseted thermoplastic tubing. Bags from 4¾ in. to 31½ in. long can be made at speeds up to 12,000 per hr. for the smallest size to 2500 per hr. for the largest size. Unit is available separately or in combination. Circle No. 264 on Reader Service Card.



Dawson Chromplater

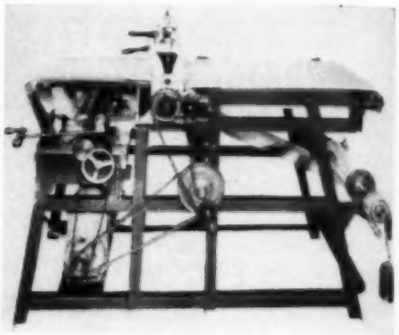
The Dawson Corporation announces its Model 50 Chromplater, which plates up to 30 sq. in. of die surface, either copper or steel. The 50 amp. selenium rectifier is equipped with 4½ in. ammeter, powerstat, on-off switch, pilot light, renewable fuse, two 3 ft. insulated leads, and copper connection. Stainless steel, water-jacketed plating tank is fitted with an exhaust hood and blower. Circle No. 253 on Reader Service Card.

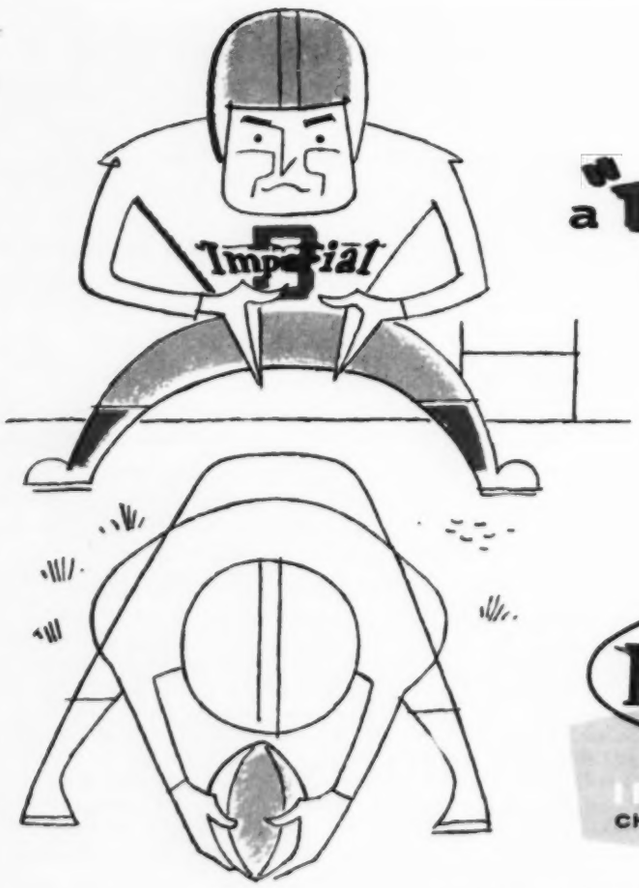


Menu Laminating Machine

Potdevin Machine Co. has recently introduced the Potdevin laminating machine for applying sheets of acetate on the front of menus. Resin

(Continued on Page 12)





a "TAKE CHARGE" guy
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We like to play quarter-back in any shop's type metal team—shouldering complete responsibility for calling the condition signals on your metal at all times. Only a plant and field personnel backed with 44 years experience can assume this responsibility on a sound business basis at minimum cost. We'll send you details if you like.

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IMPERIAL TYPE METAL CO.
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For More Information Circle 93 on Reader Service Card

48 DEPENDING ON LUDLOW FOR A 92
Source of composition for displays

36 THIS DESIGN IS SLENDER AND HIGH FOR 38
One column publication heads and job work

30 MANY MODERN PRINTERS 74
Use this Record Gothic family

LUDLOW

Record Gothic Extra Condensed

24 PROGRESSIVE ADVERTISERS ARE 65
In need of faces with a new appeal

This is the newest member of the Ludlow Record Gothic typeface family, already popular among progressive printers. Ludlow Record Gothic Extra Condensed, available in seven sizes, combines forceful display and legibility in limited space. As with other Ludlow typefaces designed for better printing, Ludlow slug composition in this new typeface is sharp and clean-cut, assuring quality production in every respect.

18 THROUGH THE YEARS LUDLOW USERS FIND 20
Simplicity and dependability real advantages

Handling general job composition on the Ludlow provides an unlimited type supply, and makes possible the production of multiple forms from a single setting of Ludlow matrices. Ludlow-set forms can be kept standing for repeat business without tying up costly type. Ludlow users also find many short-cuts that reduce costs and improve production.

14 THE PRODUCTION OF JOB PRINTING IS A PROFITABLE 20
Business when modern composing room equipment is used

12 THIS NEW LUDLOW SERIES IS ALREADY IN MUCH DEMAND FOR 58
Many uses by all commercial printers and publishers in the field

■

FREE—Send for complete showings of all members of the Ludlow Record Gothic typeface family—produced especially for the printing and publishing industry.

Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14, Illinois

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7 Ayer Award winners tell how direct printing with Fairchild engravings helped them win

Goshen (Ind.) News — F. L. Hascall, Publisher — "Direct printing from Scan-A-Graver plates enables us to even the flow of forms through our composing room and saves time in that department. The engravings made with Scan-A-Graver reproduce consistently better than other forms of engravings due to direct printing and the high quality of the engravings. We feel this was a factor that helped us win this year's Ayer Cup."

HONORABLE MENTION: Colorado Springs (Colo.) Free Press — Walter H. Nippert, Mechanical Superintendent: "We have used the Scan-A-Graver since 1951. In fact, our winning an Ayer Award Honorable Mention was helped by the sparkling reproduction we get by printing our Scan-A-Graver cuts direct."

HONORABLE MENTION: Burlington (Vt.) Free Press — Lawrence Meunier, Press-Stereo Foreman: "We are now in our seventh year with the Scan-A-Graver and obtain high quality reproduction by printing direct. Naturally, we are highly pleased to receive recognition of our work."

HONORABLE MENTION: Ponca City (Okla.) News — Harley Haven, Mechanical Superintendent: "We use the Scan-A-Graver a lot and get good results without a bit of trouble. I think it has been a boon to the industry, and I know it has been a big help to our paper."

HONORABLE MENTION: Lock Haven (Pa.) Express — Charles W. Shulz, Composing Room Foreman: "We've been getting top results by printing direct from Fairchild engravings for eight years. They certainly make for a more attractive looking paper."

HONORABLE MENTION: Gainesville (Ga.) Daily Times — A. B. Carter, Production Manager: "The Scan-A-Graver has given us greater picture coverage, less problems of deadlines and therefore newsier pictures at less cost. We find a greater uniformity of printing quality from Scan-A-Graver plates than we did from zinc."

HONORABLE MENTION: Emporia (Kans.) Gazette — George Wathen, Mechanical Superintendent – "We get better printed pictures with the Scan-A-Graver than we ever had before. Good and sharp, and we hold detail by printing direct with 85-line screen."

Printing from original halftone engravings produced on a Fairchild Scan-A-Graver or Scan-A-Sizer eliminates the loss of detail resulting from matting and stereotyping.

Fairchild engravings are flexible, easy to mount directly on the stereo. They give you direct control of quality because all engravings are produced in your own plant.

You also reduce composing room and stereo department bottlenecks. No more waiting for cuts—make up your page forms and cast stereos in advance—then attach the flexible Fairchild engravings directly to the stereotypes and you're ready to print. The result, according to these recognized experts, is a better-looking paper.

• **A Fairchild representative will be glad to show you how Scan-A-Graver produces sharper halftone production. Find out the ease and flexibility with which modern, electronically-produced engravings can be used in your shop. Write Fairchild Graphic Equipment, Inc., 88-06 Van Wyck Expressway, Jamaica, New York, Dept.** 100-58E.

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of Gathered, Saddle-Stitched and Trimmed Booklets

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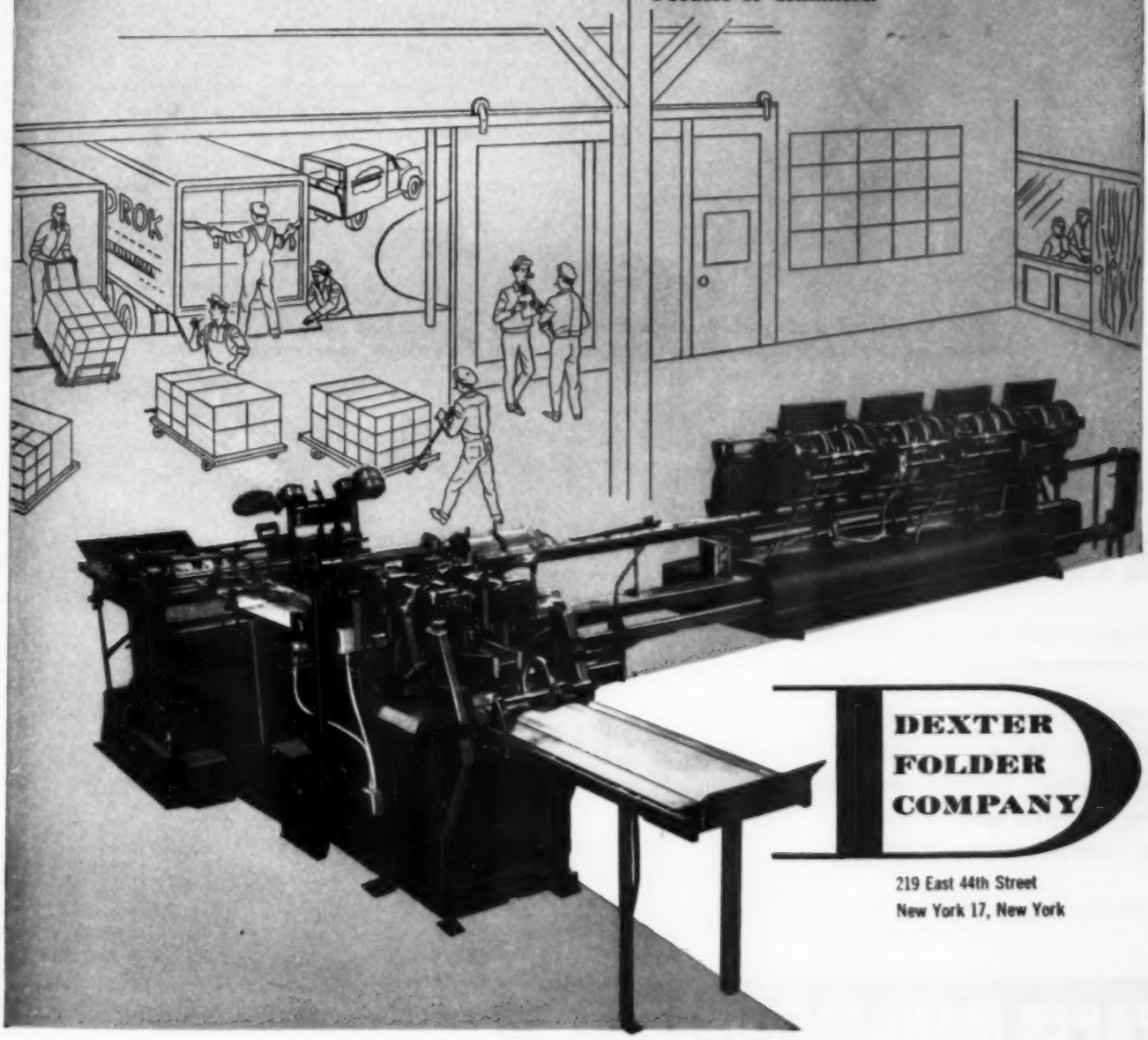
In one *completely automatic* operation the McCain Signature Feeder, the Christensen Gang Stitcher, and the McCain Trimmer will produce finished books in sizes up to 12x18" and up to ½" thick. And the machine can be furnished to feed signatures *with* or *without* gripper lap.

Here is the bindery combination that contains all of the factors which result in consistently high output. High productive speeds, positive control during feeding and stitching, exact accuracy in trimming, unmatched dependability ...all combine to assure low maintenance, high production performance.

Contact your nearest Dexter representative for an in-plant demonstration, or for complete details on McCain Feeders or Trimmers.



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Eliminates message interruptions due to roll changes.
Approximately 2850' of ALL USEABLE PAPER per carton.
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Uniform, Dependable Quality

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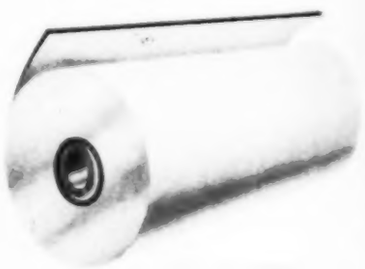

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PHILADELPHIA 15, PENNSYLVANIA

129

For Tons in Service and Performance, use PERFECTION BRAND Communication Papers

The Cleveland Press

The Newspaper That Serves Its Readers

adds 8 new Color-Convertible units— a total of 44 Hoe Press Units for its new plant

This handsome new building, which will be the home of The Cleveland Press upon completion in September, 1958, stresses the functional architecture of the modern newspaper plant. It will house a total of 44 Hoe Press Units. Eight of these will be new, streamlined Color-Convertible units, with Hoe's new 3:2 folder, to meet the requirements of the rapidly expanding newspaper.

For the third time since World War I, the Scripps-Howard Cleveland Press has purchased press equipment. Also for the third time, the decision of the Press is to purchase new Hoe units. In anticipation of further growth, the Cleveland paper's new plant is designed for the eventual installation of 72 units.

Today's newspaper, in addition to its modern plant requirements, demands the most advanced press equipment. Hoe's leadership is based on the fact that it offers exactly that—functional modernity and engineering excellence. Accordingly, the design of the streamlined Color-Convertible press units for the Cleveland paper includes, among other features, one single delivery 3:2 folder for handling up to 128 pages, and four-compartment pumps for flexibility in handling color.

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For More Information Circle 87 on Reader Service Card

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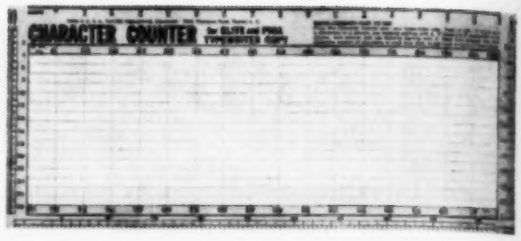
Equipment and Supplies

(Continued from Page 6)

type adhesive is applied to a roll of acetate and menus are placed on the acetate. Both are carried through laminating rollers onto a conveyor where the laminated menus are separated manually. Circle No. 260 on Reader Service Card.

Character Counter Aids Measuring Typewritten Copy

The Character Counter, a gauge developed by Taylor Publishing Co., is designed for quickly counting the number of characters in elite or pica typewritten copy. The gauge is made of rigid Vinylite, with a transparent center. Vertical rules divide this center into ½ in. columns which show six characters in each for elite copy. By turning the Character Counter upside down, the columns show five characters in each for pica copy. When placed over the typewritten copy, the actual number of characters in each line can be seen at a glance. Totaling numbers of characters in each line gives total number of characters in copy. The device is printed in two colors; is 9¼ in. by 4 in. Seven line gauges are included on its edges. On the top is the agate line gauge; the sides show 4, 5, 8, and 10 pt. gauges; the bottom edge, 6 and 12 pt. gauges. Circle No. 266 on Reader Service Card.



Taylor's Character Counter, a gauge designed for quickly counting the number of characters in typewritten copy.

Table glides effortlessly on 18 steel ball-bearings. The only mechanically correct way of carrying work to the blade, the ball-bearing, easy-gliding table is a standard COST-CUTTER feature.

NOW...ball-bearing tables on all Cost-Cutter Saws

Yes! The ball-bearing, easy-gliding table, most-wanted feature a saw can have, is now standard on all Cost-Cutter Saws. But that's just *one* of the reasons you get faster, smoother service with today's Cost-Cutter Saws.

Compare these other great features ● Micro-elevating saw head, graduated to points, for precision undercutting and mortising ● Greater capacity: 92-pica gauge bars . . . large tables take plates up to 21½" ● Five year guarantee—you get absolute assurance of quality construction and dependable performance.

Choose from 3 models, bench and pedestal type. Prices? They begin at an amazing $540.00 to give you the best saw-trimmer values on the market today!

Send today for FREE Data on Cost-Cutter Saws. Write the sales division, Pate Company, 3553 Peterson, Chicago 45, Illinois.

Model C as shown $815
Bench Saw only...$665

COST CUTTER SAWS

7325

Cost-Cutter Saws are manufactured and guaranteed by C. B. Nelson Division of Fastener Corp., Franklin Park, Ill.

NOW! Prompt delivery on Cost-Cutter Saws

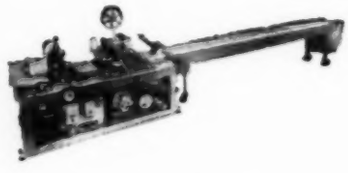
To meet increasing demand, facilities for the production of Cost-Cutter Saws have been sharply expanded. If your distributor was previously unable to supply you with the Cost-Cutter of your choice, we urge you to ask him again. Or write to the address above.

For More Information Circle 59 on Reader Service Card

Thin-space Cutter—Lanston Monotype Machine Co. announces a Thin-space Cutter, which is used to provide thin spaces 1 pt., 1½ pts., 2 pts., or 3 pts. thick for any type size from 4½ pts. to 72 pts. Cutter is designed for operation by hand, cutting the spaces from pre-cast leads which are loaded into a magazine. Machine also can be used for cutting copper thin spaces. Circle No. 270 on Reader Service Card.

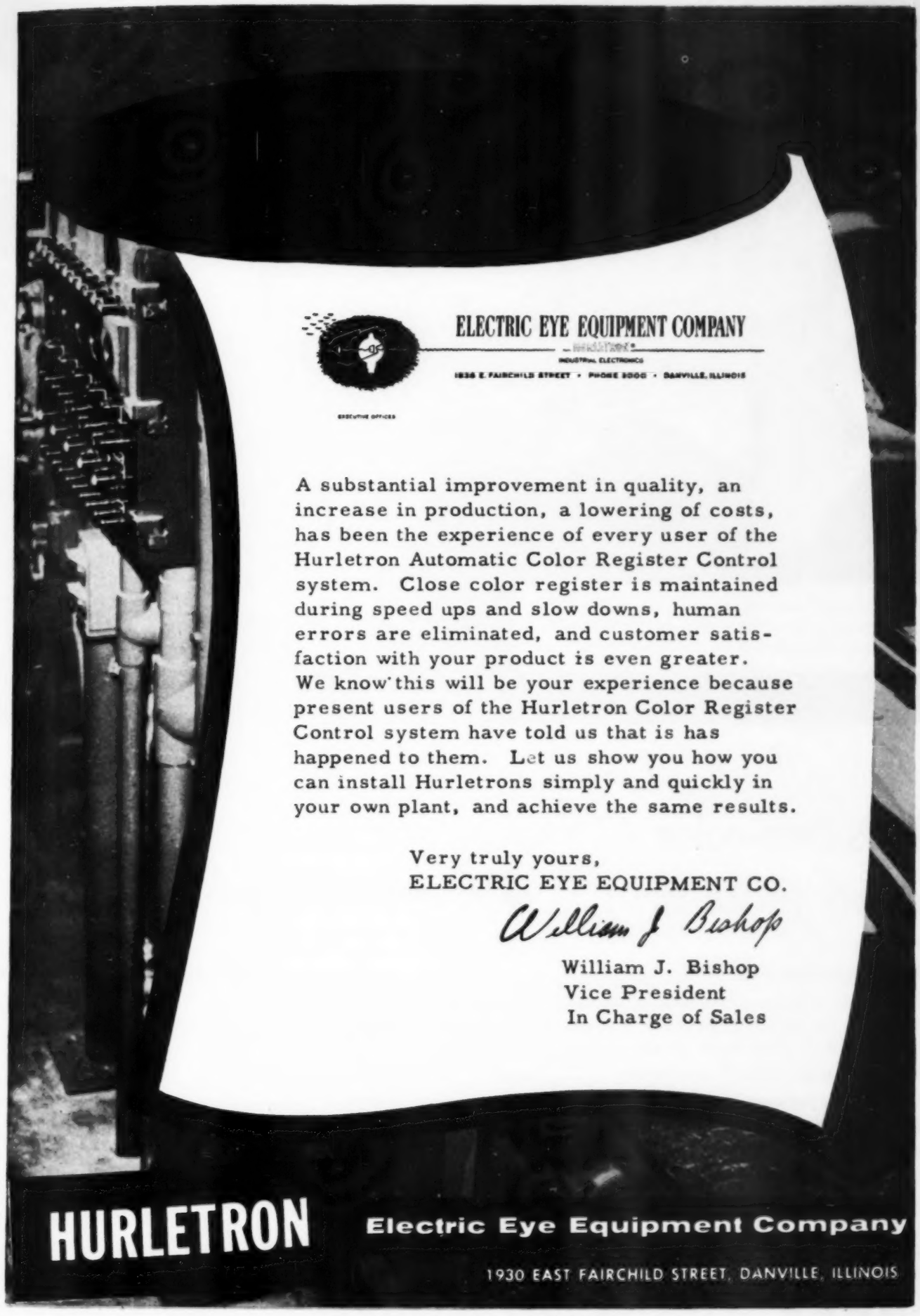
Cheshire Newspaper Labeler

A straight line newspaper labeling machine is being manufactured by Cheshire, Incorporated. In the machine, rotary Model N 3000 is featured straight line feed and delivery.



All sizes and folds of newspapers from 16 to 96 pages from present mailing strips without change in present addressing systems can be handled. Fast, automatic labeling provided at controllable speeds in excess of 16,000 per hr. is said to eliminate circulation bottlenecks. Machine operates with roll strip labels addressed from master plates, stencils or punched cards. Other features include; gripper action, automatic throwout and automatic switches. Circle No. 255 on Reader Service Card.

(*Continued on Page* 20)



ELECTRIC EYE EQUIPMENT COMPANY

INDUSTRIAL ELECTRONICS

1836 E. FAIRCHILD STREET • PHONE 3000 • DANVILLE, ILLINOIS

EXECUTIVE OFFICES

A substantial improvement in quality, an increase in production, a lowering of costs, has been the experience of every user of the Hurletron Automatic Color Register Control system. Close color register is maintained during speed ups and slow downs, human errors are eliminated, and customer satisfaction with your product is even greater. We know this will be your experience because present users of the Hurletron Color Register Control system have told us that is has happened to them. Let us show you how you can install Hurletrons simply and quickly in your own plant, and achieve the same results.

Very truly yours,
ELECTRIC EYE EQUIPMENT CO.

William J Bishop

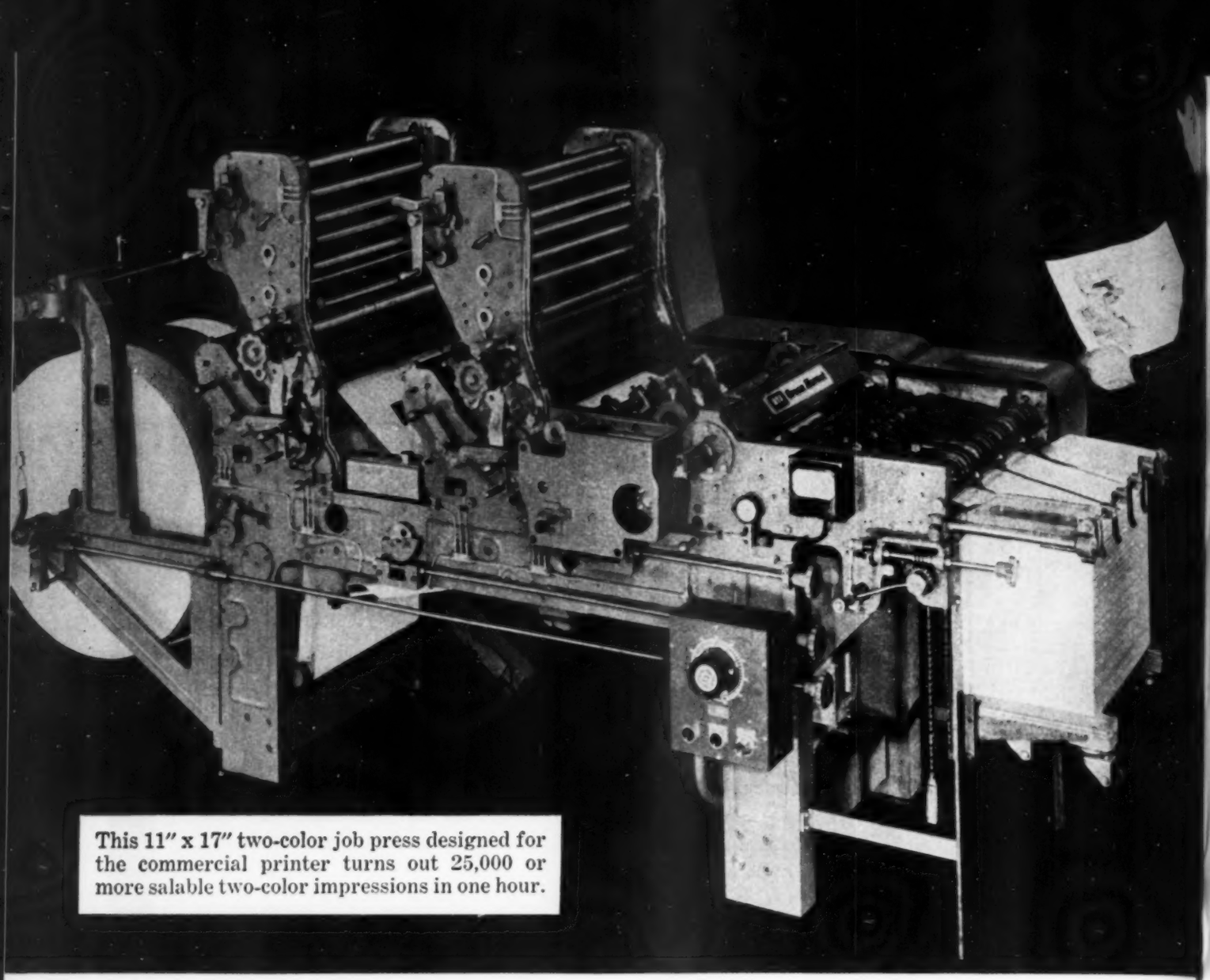
William J. Bishop
Vice President
In Charge of Sales

HURLETRON

Electric Eye Equipment Company

1930 EAST FAIRCHILD STREET, DANVILLE, ILLINOIS

For More Information Circle 56 on Reader Service Card



This 11" x 17" two-color job press designed for the commercial printer turns out 25,000 or more salable two-color impressions in one hour.

This two-color ATF Green Hornet prints more than . . . **4½ miles of paper per hour!**

Here's another ATF first!

The tremendous speeds and the operating economies of web-fed offset have been packed into this 11" x 17" two-color job press designed for the commercial printer. The ATF Green Hornet gives you up to:

25,000 sheets per hour, 11½" x 17½" . . . . . **printed two colors one side**
25,000 sheets per hour, 11½" x 17½" . . . . . **printed one color both sides**
50,000 sheets per hour, 8½" x 11" . . . . . **printed two colors one side**
50,000 sheets per hour, 8½" x 11" . . . . . **printed one color both sides**
25,000 sheets per hour, 8½" x 11" . . . . . **printed two colors both sides**

The ATF Green Hornet is designed specifically for running 8½" x 11" jobs, singly or two-up, at speeds far in excess of sheet-fed presses. It finishes the job in "one time through" because it feeds from a roll of stock and cuts it into 11½" sheets after printing.

You can print bleed on all four sides, up to 11" x 17". You can slit a 17" wide sheet to deliver your two-up jobs cut in half. You can adjust register in either direction while running. You can print two colors on both sides of an 8½" x 11" job, with ATF's unique "double-ending" system.

It's a real production "whiz," even with its few limitations.

Get the full story from your ATF Representative or Branch Office . . . *or write to*

ATF AMERICAN TYPE FOUNDERS 200 Elmora Avenue, Elizabeth, N. J.

Better, more profitable printing . . . from the most complete line of equipment

For More Information Circle 10 on Reader Service Card

How the Dow Etch Process can save money for you

Over 200 Dow Etch machines are now in operation. Engravers, printers and publishers in all parts of the U.S. have fully proved the economy and other merits of the process. Here are some of the advantages they are enjoying:

powderless etch saves time. The Dow Etch Process eliminates repeated powdering operations, produces top-quality magnesium engravings in much less time than conventional methods. This means increased production, fewer man hours per job and greater flexibility in meeting tight deadlines. With a recently developed two-step bath, a Dow Etch machine will produce complete combination plates in about fifteen minutes.

excellent etch quality. The process produces shoulderless engravings with excellent quality of halftone depth and virtually no undercutting of image. Magnesium used with the Dow Etch Process assures top quality engravings in minimum time. And magnesium can be readily re-etched with slightly modified procedures.

good image retention. Magnesium plates made by the Dow Etch Process have an exceptional fidelity of image. Because of the hardness and good dimensional stability of magnesium, runs of one and two million are not uncommon. Magnesium plates can be chrome plated for even longer runs.

less makeready. Elimination of shoulders reduces makeready time, eliminates tooling and downtime at the press.

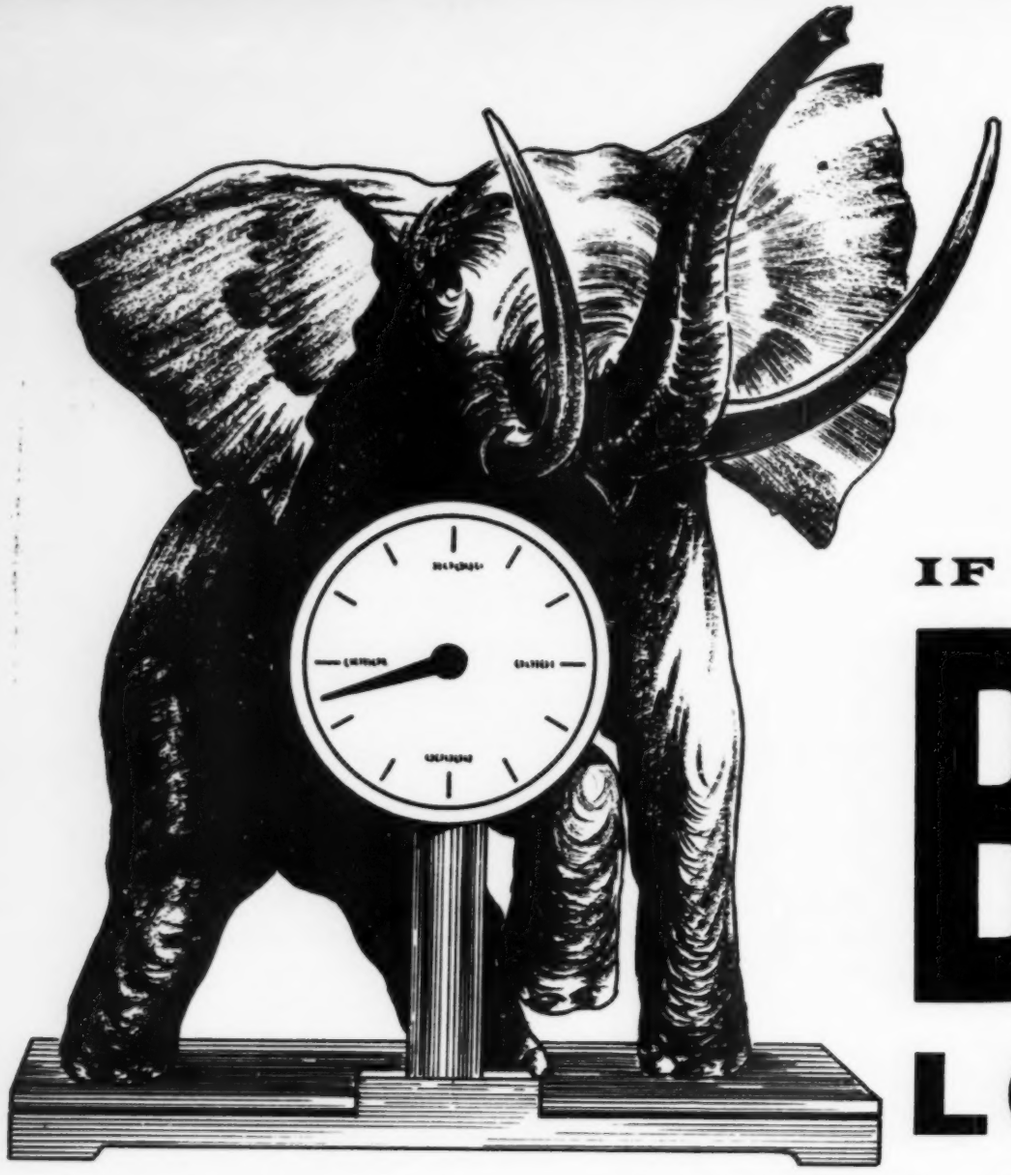
technical assistance. Licensees of the Dow Etch Process receive the services of a Dow technical expert in their own shops to fully explain the machine and train an operator. Further technical assistance is also available.

for more information, write to

THE DOW CHEMICAL COMPANY,
Midland, Michigan,
Department MA 1422BB

YOU CAN DEPEND ON DOW

For More Information Circle 51 on Reader Service Card



IF YOU WANT BIG LOADS

WITHOUT INK OFFSET

USE OXY-DRY SPRAYERS*

• The full load means more profits for any printer that has large runs, needs all the floor space he can find for work in progress and counts every minute unloading and loading require. Hundreds of printers in the U.S., Canada and many foreign countries have OXY-DRY* sprayers for these same reasons. They are getting ink-offset free work with loads of 5200 pounds at press speeds of 5000 impressions per hour on multi-color presses.

• While your problems may not be speed or large runs you can still reap many competitive advantages with OXY-DRY* sprayers . . . cleaner, sharper, smoother sheets that are static-free for perfect jogging. Sheets dry faster, can be put into bindery work sooner and above all are completely free of ink offset even when run at full press speeds.

• Mechanically, OXY-DRY* sprayers are marvels of precision operation. Once set for the type of work being run, they run shift after shift without adjustment, using the least amount of powder possible, and if you really want a heavy lay of powder OXY-DRY* sprayers are what you need.

• Since you may already be buying an OXY-DRY* sprayer with reject sheet waste, pressroom fog maintenance waste and excess powder waste why not check through what OXY-DRY* can do for you? Write, wire or phone for more information or a plant survey.

**Fully protected by U.S. patents*

OXY-DRY *sells profits to printers*

OXY-DRY SPRAYER CORPORATION

NEW YORK **CHICAGO** **SAN FRANCISCO**

Dept. PE, 1134 West Montrose Avenue, Chicago 13, Illinois

Also Manufacturers of:

ANTI-INK OFFSET POWDERS • ELECTRONIC NEUTRALIZERS • SHEET CLEANERS • WEB CLEANERS • DIE-CUT BLANK CLEANERS • PLATE WASHERS & DRYERS • PLATE GRAINERS

FOR YOUR CONVENIENCE . . .

This postage-paid card is for your convenience in requesting more facts on any item in this issue

PRINTING EQUIPMENT *Engineer*

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PERMIT NO. 2205
CLEVELAND, OHIO

BUSINESS REPLY CARD
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4¢ POSTAGE WILL BE PAID BY

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1276 WEST 3rd STREET
CLEVELAND 13, OHIO

READER SERVICE DEPARTMENT

This postage-paid card is for your convenience in requesting further information on any item in this issue of PRINTING EQUIPMENT Engineer. Circle the item number for any item described or advertised in this issue. The information will be sent to you promptly.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
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PLEASE PRINT OR TYPE

(This card valid only if used before October, 1957)

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Company Name_____

Company Address_____

City_____ Zone____ State_____

SEPTEMBER '57

WANT MORE FACTS?

USE THE CARD

IT'S EFFICIENT, FAST AND EASY

We've licked our slipping problem - savin' us plenty, too!

He's talking about ALGRIP—A.W. ALGRIP—the world's only abrasive rolled steel floor plate that provides super-safe footing under the *most hazardous* slipping conditions—on flat *or inclined* surfaces.

ALGRIP licks slipping and skidding hazards thoroughly by providing thousands of abrasive traction particles at every step. It's made by a patented process in which a grinding-wheel type of abrasive is rolled—*not coated*—to a controlled depth as an integral part of tough steel plate. Usage merely exposes more abrasive.

Look around for slipping hazards and make a test installation in your worst area. It'll save you plenty, too, as accident and insurance rates go down. Use it as an overlay or as independent flooring. ALGRIP fabricates easily and requires no maintenance.

ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—*approved for safety by Underwriters' Laboratories*

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

Please send A.W. ALGRIP Booklet AL-S10

Name_____

Title_____

Company_____

Address_____

City_____ Zone_____ State_____

OTHER PRODUCTS:
A.W. SUPER-DIAMOND economy rolled steel floor plate—Plates—Hot and cold rolled sheet and strip—(Alloy and Special Grades)

For More Information Circle 4 on Reader Service Card

←For More Information Circle 140 on Reader Service Card

COURIER-POST

CAMDEN NEWSPAPERS INC
CAMDEN NEW JERSEY

OFFICE OF
BUSINESS MANAGER

Cutler-Hammer, Inc.
Printing Equipment Division
8 West 40th Street
New York 18, New York

Attention: Mr. Jesse M. Strong

Dear Jesse:

We moved into our new building nearly two years ago. It is about time we said "thank you" for a number of things:

1. Your company was most helpful to us during the time we were making plans. Our job was a great deal easier because of the battery of Cutler-Hammer engineers who were working in our behalf.

2. During installation of the Cutler-Hammer Press Drive and Controls and the Press Conveyor System, we received excellent cooperation. We may have set some kind of record when we were able to begin operations in the new building exactly on schedule.

3. You have provided outstanding service since we opened. It is reassuring to know that reliable help, advice and service is available at all times and on a moment's notice. Your "after-the-sale" interest in us has been most gratifying.

Please accept for yourself and your associates our sincere thanks.

Cordially yours,

CAMDEN NEWSPAPERS INC.

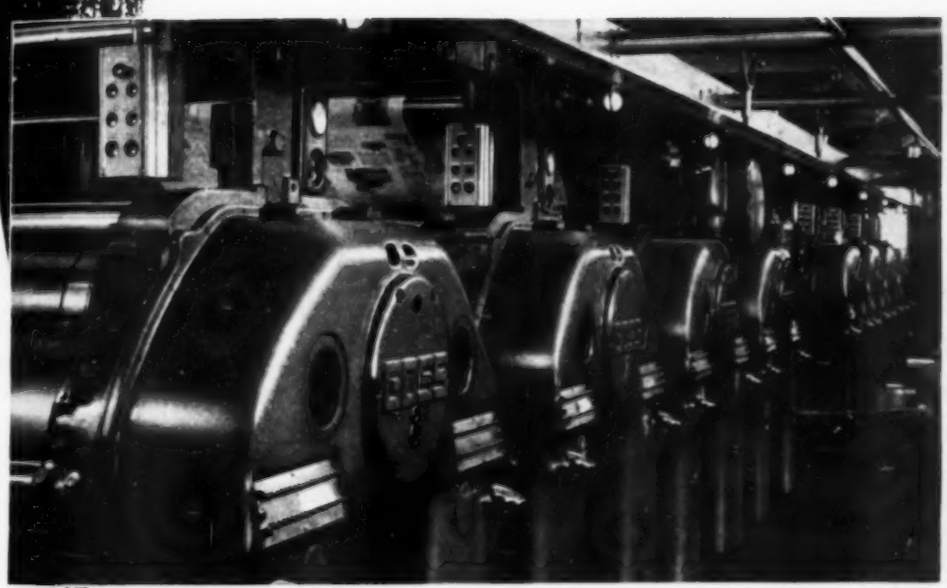
Neal E. Dyer

Neal E. Dyer
Business Manager

NED:nk

Mr. Neal E. Dyer is Business Manager and Mechanical Superintendent for the Camden Courier-Post.

The CAMDEN COURIER-POST proves it pays to keep it simple...keep it sturdy ...keep it CUTLER-HAMMER



The Camden Courier-Post's eight unit Goss Headliner press with a center folder is geared to deliver 52,500 papers per hour. The unit press drive and control were provided by Cutler-Hammer.

Two Cutler-Hammer Heavy Duty Newspaper Conveyors receive the papers from the folder and dispatch them to the mailing room for bundling.

CUTLER-HAMMER
MOTOR CONTROL
C-H

When you build a new press plant, expand existing facilities, or modernize an old pressroom; you *too* will find it pays to keep it simple . . . keep it sturdy . . . keep it Cutler-Hammer. Write today for complete information on Cutler-Hammer's unit type or group type press drives and control. Information also available on new Cutler-Hammer Oil-Tight Pushbutton Control Stations, Web Break Detectors, Web Severing Devices, and the world's finest Newspaper Conveyors. CUTLER-HAMMER, Inc., 1460 St. Paul Avenue, Milwaukee 1, Wisconsin.

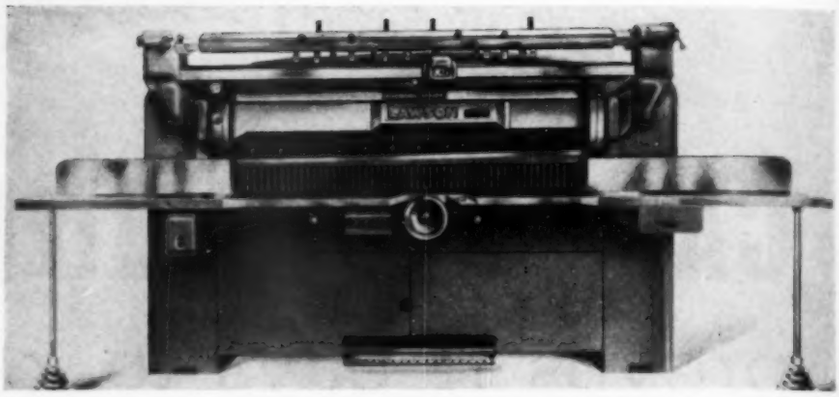
For More Information Circle 47 on Reader Service Card

Equipment and Supplies

(Continued from Page 12)

Larger Clamp Cutters

The E. P. Lawson Co., a subsidiary of Miehle-Goss-Dexter, has begun manufacture of heavy duty hydraulic clamp cutters in 60 in., 66 in., and 69 in. sizes. According to D. W. Schulkind, Lawson president, these larger cutters have been specifically designed to meet the large sheet cutting requirements of the Graphic Arts industry. Featured as optional equipment on the 60 in. cutter is an extended 77 in. rear table which permits rear loading. Among other features of the cutters are an air cushion device for swinging heavy lifts of paper and a closing device built into the rear table to close the slot in which the back gauge travels. According to Schulkind, this will eliminate the problem of sheets snagging when swinging or rear loading. Electronic spacing device, said to enable 0.002 in. spacing accuracy, is optional on all cutters. Cushioned hydraulic clamp is used to control clamp pressure precisely for each type of stock. A clamp lead, built into every cutter, assures adequate time for the clamp to remove excess air from the lift and hold the pile firmly, before the knife starts to cut. Knife speed is rated at 42 strokes per min. and adjustable third or center bearing has been added to the knife bar. All cutter adjustments are made from the front of the machine. Positive non-repeat device and overload device are among the safety precautions incorporated on the cutter. Circle No. 275 on Reader Service Card.



View of the new Lawson hydraulic clamp paper cutter, which will be available in 60 in., 66 in., and 69 in. sizes.

EVERY DAY MORE THAN

10,000

PRINTERS STOP OFFSETTING

with Ortman-McCain SPRAY SYSTEMS

Like the 50,000,000 Frenchmen - - - we don't believe that 10,000 printers can be wrong - - - especially when *four out of five* Ortman • McCain users are already *repeat* buyers.

We think there's a reason - - - and a good one - - - OMC is the world's only manufacturer specializing exclusively in spray systems for all branches of the Graphic Arts.

OMC Spray Systems will stop offsetting, increase press production, and reduce waste and spoilage. We don't have to tell *you* that this will help your profit picture.

It will pay you, too, to investigate OMC Spray Systems. Remember:

* Liquid, powder, or hot wax — there's a unit to fit your needs.
* There's a unit for every type and size of press.
* There's a unit for every printing process — and for every kind of stock.

Tell us about your offsetting headaches - - - press — stock — other details — we'll speed you a helpful reply.

OMC

ORTMAN-McCAIN CO.

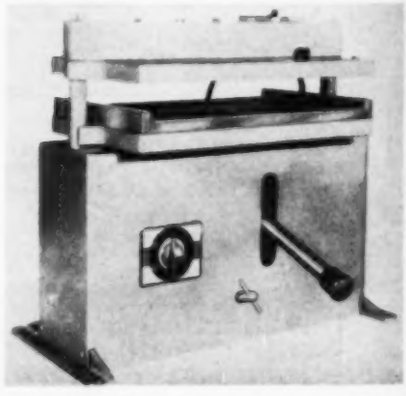
Available through leading Graphic Arts Suppliers

1333 West Washington Blvd. • Chicago 7, Illinois

For More Information Circle 139 on Reader Service Card

Hydraulic Plate Press

Craftsmen Machinery Co. announces the MoldMaster hydraulic plate press for making rubber plates and stamps, and plastic laminates. Upper and lower platens measure 10 in. by 15 in., and inside diameter of the steel chase is 9 in. by 14 in. A thermostatic unit controls heat from 175 to 425 deg., molding pressure is hydraulically applied and 30 min. timer automatically regulates line current. Unit may be obtained for either 110 v. or 220 v., 60 cy., a.c. operation. Circle No. 254 on Reader Service Card.



(Continued on Page 67)

Electronically controlled quality
brings every detail to life . . .

3M BRAND MAKEREADY

Full details on the next page . . .

3M MAKEREADY *case history report:*

"3M Makeready raises quality to a marked degree . . . eliminates trial and error makeready . . . insures definite time savings."

The striking full-color Mt. Rushmore scenic by Les Blacklock, outstanding wildlife and scenic photographer, reproduced on the preceding page provided some really knotty printing problems. The intricate details, the areas of high contrast and the difficulty of holding true-nature colors is a real challenge to the most experienced pressman . . . especially in making ready. Hart Publications reproduced it with such perfection *at a substantial time savings* using 3M MAKEREADY which justifies printing pressures automatically. See how 3M MAKEREADY can cut costs and step up quality in your shop. To arrange for a free demonstration or complete information, write: Minnesota Mining and Manufacturing Company, St. Paul 6, Minnesota.

Telephones 99 and 69

The Hart Publications Inc. • Printers

22 THIRD STREET SOUTH • LONG PRAIRIE, MINNESOTA

SALES OFFICE: 1200 Currie Ave. Suite 210 Minneapolis 3, Minn. Telephone: FE. 2-6497

Minnesota Mining & Manufacturing Co.
900 Bush Street
Saint Paul 6, Minnesota

Gentlemen:

We purchased our 3M Makeready exposure unit in July, 1955 and have been using it continually since that time. We print several publications such as Inland Printer and Postgraduate Medicine and catalogs that require high quality work. We have been thoroughly pleased with the controlled quality that we have been able to achieve through the use of the 3M Makeready system.

Some of our pressmen who have been journeymen for many years were not anxious to start with the 3M Makeready process, but the results were the only selling that they needed. "The quality of our halftone reproduction is more and more gratifying every day" is a statement that was made just recently. In addition to the quality achieved, we know that there is a definite time saving in the making ready of each form.

Very truly yours,

L. G. Palmgren, President

We serve publishers who are interested in quality printing and with the advent of the 3M Makeready process we have been able to raise the quality of our work to a marked degree.

In addition to insuring quality makeready, the 3M Makeready system opens the way for lower costs in pressroom operation and is the most satisfactory approach to eliminating trial and error methods in makeready.

Your service and cooperation during the time the 3M process has been in use here, together with the over-all results, are all very gratifying to us.

Yours very truly,

W. C. Brown, Superintendent

3M MAKEREADY continuously serves the 16 cylinder presses, five of which are two-color at Hart Publications, Inc., an exclusive letterpress plant, according to W. C. Brown, Superintendent, left, and L. G. Palmgren, President, right.

3M MAKEREADY
BRAND

"3M" is a registered trademark of Minnesota Mining and Manufacturing Company, St. Paul 6, Minnesota.
General Export: 99 Park Avenue, New York 16, New York. In Canada: P. O. Box 757, London, Ontario.

NEW PLANT BUILT TO HOUSE LARGEST PLANT INSTALLATION

Another landmark is rising in Canada's largest city. It is the outstanding new plant of the Montreal Star which will house the largest single press installation in the Dominion—25 Goss Headliner Units.

The press will be equipped with 11 Color Cylinders, Tension Lockup, Goss Reels-Tensions Pasters with fully automatic Paster Pilot Controls and 5 Folders . . . 3 to 2, capacity 128 pages, Folded Edge Forward Delivery.

Montreal, with a population over 1,650,000, is Canada's leading industrial market, has some 12% of the Dominion's retail sales and is one of the world's largest inland ports. It is a unique metropolis with a blending of the English and French traditions that is truly Canadian.

Founded in 1869 the Star is Montreal's leading English newspaper and has long maintained practically complete coverage of Montreal's English-speaking population. Its steadily rising circulation now is over 167,000 weekdays and 187,000 Saturdays.

THE GOSS PRINTING PRESS COMPANY
2601 W. 31st Street • Chicago 50, Illinois

A Division of Miehle-Goss-Dexter, Incorporated

For More Information Circle 72 on Reader Service Card

←For More Information Circle 120 on Reader Service Card

Literature

Circle Numbers on Reply Postcard—It's Easier and Quicker

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. *Printing Equipment Engineer* will forward your request.

Composing Room

STAR SELECTRO-MATIC QUADDER

An eight page bulletin in which is described features of the Star Selectro-Matic Quadder is available from Star Parts, Inc. Quadder is equipped with hydraulically actuated rack and gear train said to enable good control of vise jaw movement. Circle No. 319 on Reader Service Card.

LUDLOW ADMIRAL SCRIPT

Ludlow Typograph Co. has issued a folder showing examples of the use of Ludlow Admiral Script in commercial printing and advertising display, as well as alphabet showings of each point size. Type face is supplied in six sizes from 14 pt. to 48 pt. inclusive. Circle No. 324 on Reader Service Card.

ALIGN-A-MAT

Literature regarding the Fisk Align-A-Mat is available. Device is used to restore worn out mats to factory standards. Circle No. 342 on Reader Service Card.

FEDERATED METALS BOOKLET

How to Save Money on Type Metals is the subject of a booklet issued by Federated Metals Div., American Smelting and Refining Co. Information regarding Castomatic type metals is included. Circle No. 331 on Reader Service Card.

MOHR SAW

Mohr Lino-Saw Co. has prepared a booklet entitled, *Cutting Composition Costs*, to describe the Mohr Saw. Illustrations are included. Circle No. 334 on Reader Service Card.

FILMOTYPE CATALOGS

Catalogs descriptive of Filmotype's complete line of photographic type faces have been released. Included are over 1000 styles and point sizes. Circle No. 343 on Reader Service Card.

Platemaking

LETTERPRESS FOLDER

Rolled Plate Metal Co. has prepared an attractive four page folder regarding the advantages of modern letterpress. Zomo Zinc, Micro-Metal, Zomag, A-Z Alloy and Owl Brand photoengravers plates are described in the illustrated folder. Circle No. 307 on Reader Service Card.

CHALLENGE EQUIPMENT FOLDER

Information on a filing cabinet for offset and duplicator plates, flats and artwork, and a portable vertical stock rack are included in a four page folder issued by the Challenge Machinery Co. Also included is information on an expanded line of galleys and galley cabinets. Circle No. 308 on Reader Service Card.

SIGNAL CORPS' SAVINGS

The Haloid Company has available a four page, two color bulletin describing how the U. S. Army Signal Corps is said to save $500 thousand a year on paperwork duplicating. Uses of XeroX Model 1218 copying equipment and offset duplicator are explained. Byproduct savings in time, postage, and handling are also given. Circle No. 309 on Reader Service Card.

COST CALCULATOR

Kenro Graphics, Inc. has prepared a cost calculator which can be made to show the difference in cost of producing negatives in your own plant as compared to purchasing from outside suppliers. Production time in hours can also be determined. A proportion

scale is used to show reduction or enlargement of artwork in terms of percentage. Pocket size bristol board calculator is fitted with adjustable slide bar containing data scales. A copy will be sent you gratis upon request. Circle 306 on Reader Service Card.

PHOTO-COPYING MACHINE

The A. C. Nielson Co.'s use of the Foto-Flo photo-copying machine is the subject of a bulletin issued by the Haloid Company. The four page, two color bulletin illustrates and explains how Nielsen uses the machine for furnishing field reports, surveys, and radio-TV data to its clients. Circle No. 310 on Reader Service Card.

TWIN-PLATE ROUTER

Literature descriptive of the Sta-Hi twin-Plate Router is being offered by Sta-Hi Corporation. Two identical color stereoplates can be routed simultaneously. Circle No. 320 on Reader Service Card.

SCOTT MAT ROLLER

Walter Scott & Co. has prepared literature and specifications regarding its Ideal Mat Roller. Features of roller include 3 h.p. reversible motor with automatic brake, antifriction bearings, and finger tip push button starting. Circle No. 321 on Reader Service Card.

LAKE ERIE BULLETINS

Lake Erie Engineering Corp. has released a Directomat bulletin and Acraplate bulletin, concerning its duplicate letterpress plate molding equipment. Directomat machine is used for direct pressure stereotype mat molding and Acraplate for rubber and plastic plate molding. Circle No. 330 on Reader Service Card.

CARBIDE CUTTERS

American Wood Products & Tool Supply offers a catalog in which is contained information about the carbide tipped saw blade and tungsten carbide tipped cutter for Pony Autoplates. Circle No. 341 on Reader Service Card.

CONSTANTARC CAMERA LAMPS

Complete data and illustrated literature about the Macbeth Constantarc Lamps are available from Macbeth Arc Lamp Co. Features included are maximum evenness of illumination, maximum light intensity and consistent light output. Circle No. 328 on Reader Service Card.

AUTOMATIC ARC LAMP

Bulletin 205A descriptive of the nuArc automatic arc lamp is available from nuArc Company, Inc. It is said that complete light control and guaranteed color temperature and intensity can be obtained with the lamp. Circle No. 336 on Reader Service Card.

MAGNESIUM BASE

The Monomelt Company, Inc. has prepared a bulletin containing descriptions of its magnesium base. Base is available in all heights and sizes. Circle No. 340 on Reader Service Card.

LANSTON LITERATURE

Literature is available from Lanston Monotype Co. regarding the Lanston Camerama, the Magnastop step and repeat machine, the MH overhead camera and the vertical plate-coating machine. Circle No. 329 on Reader Service Card.

Pressroom

MIEHLE 17 LITHOPRINT

Miehle Printing Press & Mfg. Co. has issued a six page folder regarding the Miehle 17 Lithoprint with sensitized paper plates. Special features and advantages of this combination for short run work are included. Circle No. 311 on Reader Service Card.

SHEET FEEDER ATTACHMENTS

Dexter Folder Co. offers a seven page bulletin covering 16 attachments said to bring many of the advantages of late model metal sheet feeders to older units now in the field. Included are descriptions of each device, information covering advantages offered, and keyed illustrations. Circle No. 313 on Reader Service Card.

OFFSET INK BOOK

Davidson Corporation has published an ink color guide to help users of small offset equipment in the selection of inks and additives. Guide contains specimens of the 33 most popular inks, including the primary colors and

derivative colors. A good selection of black inks is included. Other features are the use of three screens to light, medium and dark tonal values and an additive section. Guide is plastic bound. Circle No. 312 on Reader Service Card.

HERBERT PRODUCTS

Literature concerning Herbert oxy cold bar static eliminators, parabolic heaters and gas ink driers is being offered by Herbert Products, Inc. Circle No. 335 on Reader Service Card.

(Continued on Page 65)

NOW for Quality in high speed, inline Board Printing

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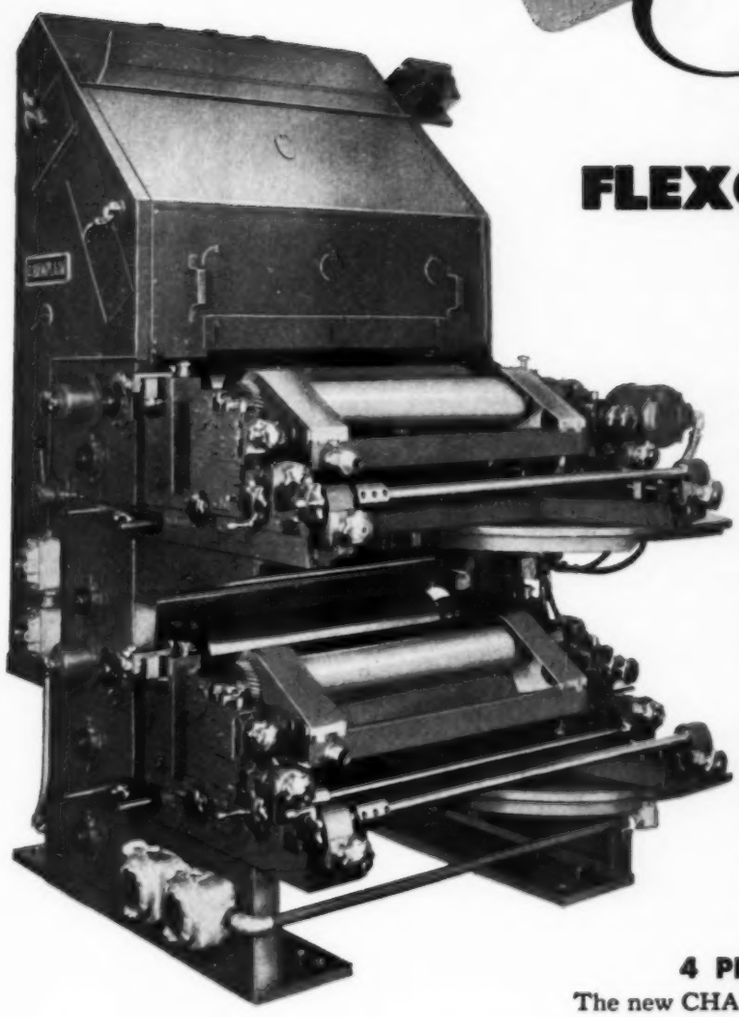
FLEXOGRAPHIC PRESS



A heavy duty, precision-built unit, the CHAMPLAIN Flexographic Press is designed especially for printing on board and for fine quality multi-color reproduction. It fits perfectly into inline use with equipment to produce printing, die cutting, and stripping of folding cartons in one continuous operation, or in combination with a rotary sheeter, rewind or specialty unit. Accommodating board stocks up to 30 pt., it also meets the needs for printing cellophane, plastic, glassine, foil, and paper.

UNIT STACK DESIGN permits vertical assembly of one, two, or three printing units or color stations in a single piece of equipment, reducing floor space and providing easy accessibility for the pressman. Individual stack drying systems boost operating speed on multi-color work through quick-drying of colors between stations. The web is delivered printed side up for easy register inspection and control. A second unit stack may be added for additional stations.

4 PRESS SIZES IN 2 PRESS TYPES

The new CHAMPLAIN Flexographic Press is available in two types, in 20″, 26″, 36″, and 44″ sizes with a plate cylinder circumference range of 12″ to 36″

REPEAT INCREMENT press provides printing increment repeats of .157″, .250″, .314″, or larger within the circumferential range. Its *exclusive* "swing-out" design of fountain and plate cylinder section simplifies color or plate changes, saves time, and increases production. With more than one stack in use, other units continue to run while "down" units are prepared, ready for immediate use on the next run.

ALL-SIZE press particularly fits box board or label printing operations where repeat size length varies because of glue-flap interlocks, folds, or filling machine specifications. Any size repeat cylinder can be run within the 12″ to 36″ circumference range without step increments. The plate cylinder is driven directly from the main press drive, eliminating change gears. It saves stock, too.

Write for your copy of descriptive bulletin on the new CHAMPLAIN FLEXOGRAPHIC PRESS. Champlain Company, Inc., 88 Llewellyn Ave., Bloomfield, N. J. Chicago Office: 520 N. Michigan Ave., Chicago 11, Ill. In Europe: Bobst-Champlain, Prilly-Lausanne, Switzerland.

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Champlain manufactures a complete line of rotogravure, flexography, rotary letterpress and allied equipment for packaging and specialty printing.

For More Information Circle 38 on Reader Service Card

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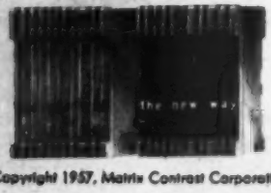
"Plants that start using the Matrix Contrast Service for their matrices begin to notice the difference the very first day . . . the machine operators start catching most of the visible errors (double letters, missing letters, transpositions, wrong fonts) where they should be caught — in the assembler . . . the floormen spend less time inserting new slugs . . . and the number of revise proofs that have to be pulled and checked drops appreciably.

"Equally important is the boost it gives to the linecasters' efficiency and morale. In fact — everyone benefits when your matrix reference marks are maintained by Matrix. Why not get in touch with us today and let us show you actual cost figures for plants that are already using the thrifty Matrix Contrast Service to help keep production expense to a minimum?"



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For More Information Circle 114 on Reader Service Card

PRINTING
EQUIPMENT
Engineer
September 1957

Problems of the Printer

Entering Offset Field

By **EDWARD BLANK***

**Assistant to the President, Publishers Printing-Rogers Kellogg Corp., Long Island City, N. Y. From address presented at the Buffalo convention of Intl. Craftsmen's Assoc., August 1957.*

The problems of the letterpress printer entering the offset field affect many things in an established printing plant. From a management point of view a decision has to be made regarding the type and size of press needed for the offset operation. It is necessary to know what kind of work will be handled in the plant. Some plants are satisfied with the purchase of used equipment. The printer should know his dealer well if he considers used equipment. New equipment, of course, is most desirable and will give definite advantages in quality and speed.

What Size Press?

What size press does the printer need? Many printers decide upon a press entirely too small for their operation because they wish to start in a small way to acquaint themselves with the new process. This is, in many cases, a mistake. The printer might as well consider from the start equipment large enough to avoid having to replace the small equipment in a short time due to its inadequacy. It is suggested that you complement present letterpress equipment with offset equipment of comparable, or even double, size. It is more economical in offset to step the same image across the plate than it is to make duplicate electros for letterpress.

Consider, also, the necessary manning on offset presses. For instance, in most localities a 22 in. by 29 in. one-color offset press can be run with one pressman. Consequently, it makes sense to purchase this press and get the maximum press sheet from one-man operation. The same situation holds true on a two-color 30 in. by 39 in. press which two men can operate. If the press sheet size is larger, three men might be required to operate the press.

In general, lithographers put every type of time-saving accessory possible on offset presses. Their thinking is that if there is any device to make a press more efficient they should get the advantages and the added production immediately. Some of these accessories are washup machines, water levelers, ink agitators, dry sprays, neutralizer bars, etc.

You will have to make a decision on the installation of a camera and platemaking section. Here again, the type of work governs whether or not you will require this equipment immediately. If your printed product is form work, book work or short runs, you will probably want to consider installing camera and platemaking equipment. If you will do long runs and color work it is preferable to purchase film and plates from trade sources.

Another suggestion is to start off with a trade platemaker and gradually accumulate experience in working with film and plates made by experienced men. However, if you install camera and platemaking equipment, definitely consider presensitized plates and prepared chemicals. Supply firms will be glad to send trained men to work with your men on camera, and platemaking problems.

In entering the offset field, you will find supervision is a big problem. It will be necessary for you to get a man with as much experience as possible in lithography. You need his know-how badly at the start. Avoid the old-timer who is set in his ways and cannot properly instruct the men. Make use of local schools offering training courses in lithography. LTF also has visual-aids, instruction booklets, and will even train your men at its laboratories in Chicago. This is far better than letting them learn by bitter experience and much spoiled work. You might also consider other printing plants in your locality for observing lithographic operations, even to the point of placing your employee in another plant for several days if possible.

Importance of Record Keeping

An entirely new field is open in estimating and costing when offset is added. Some of the unfamiliar operations added will be those performed in the darkroom, camera and platemaking sections. It will be necessary for the estimator to carefully check with the cameraman, platemaker and pressroom foreman for the time allowances required to produce the job until the estimator becomes familiar with the operations.

Good records are necessary as

well as good time reporting in order to build up a historical background of time allowances required to produce various offset jobs. These records will, of course, be used for future estimates of similar kinds of work. Hour costs for various new offset operations can be set up with the help of your local employers' associations or a budget figure can be set up by your accountant. You must determine whether your hour costs will include such items as chemicals, film, etc.

Your estimator can learn a lot from the outside purchase quotations from trade platemakers. On plates which are purchased outside you must furnish the metal for the plate as well as providing cost of graining. In offset, ink consumption is lower but pigments must necessarily be stronger to repel the water. Consequently, inks cost more per pound but since there is less ink used the cost of ink for the job is approx. the same as in letterpress. Regular offset papers can be used for halftone and full color work and are cheaper than machine-coated letterpress papers. Offset coated stock must be sized to prevent picking and consequently is more expensive than letterpress coateds. A savings then will result only if the customer allows a substitution of regular offset paper in place of a coated letterpress.

Planning Offset Work

The planning procedure is more complicated in offset than in letterpress. The litho planner must make an accurate plate layout drawing —correct in every detail showing trim sizes, number of units, folding imposition, bleed dimensions, margins, etc. If he makes a mistake the entire plate may have to be remade. In addition, the planner usually works with the customer on color proofs and blueprints and must convey the instructions of the customer to the plant via these color proofs and blueprints. Lineup and proofreading of offset press sheets must be done quickly since makeready times are short and the press is practically ready to run when a sheet is sent to the lineup and reader sections for OK.

Storage Procedures

Storage of film presents no problem in offset. As a general rule, combination job films are removed from the flats and stored separately since it is unlikely the same combination will recur in a reprint. Entire flats are stored for reprint possibilities in blueprint file cabinets. The advantages of storing film are clearly shown when we consider that film equivalent to 1000 lbs. of type can be stored in one legal-size envelope in a filing cabinet. And, of course, the tying-up of metal for storage on shelves at 20c to 30c per lb. is eliminated.

An opportunity presents itself for leveling-off work loads by routing work to either offset or letterpress presses when you begin combination operation. You might pull reproduction proofs of new letterpress jobs, run the first job letterpress, file the repros and then when reprinting the job you can have the choice of going to offset or picking up the type and reprinting letterpress. You have the added advantage of using the repro proofs and printing by offset when the type becomes worn.

Much film can be accumulated unless a proper system is installed under which film is destroyed after a given time. You might consider a system whereby a different colored envelope is used to store negatives each year. If you decide to destroy film after three years storage you would have three different colored envelopes, one for each year. For instance, if the first year envelopes were blue, you would automatically destroy all film in the old blue envelopes when you commenced using new blue envelopes after the third year.

One of the reasons an offset job makes its way more rapidly through the plant is because the customer, by approving the camera copy (usually called the mechanicals), has approved the margins and has a good idea of what the finished printed piece will look like before it is run. As a general rule, fewer changes are made by the customer on blueprints, which is the lithographer's proof, than are made on the proofs pulled by the letterpress printer.

In some plants the storage of offset plates presents a problem. Plates must be gummed properly, covered with a press sheet to prevent scratches, hung properly either on pipe racks or A-frames, filed for locating quickly and reconditioned before using again on press. Many offset plants do not store plates unless they are color process plates or plates of a complicated nature. Instead, these plants store the film and remake the plates should a reprint be necessary.

Inspect for Quality

Quality inspection procedures are necessary in plants beginning a new offset operation. There is a great tendency to allow a poor job to go through and it is up to management to curtail this bad practice. There is a possibility that if too many poor quality, borderline jobs are allowed to go through, the men would continue to be careless and indifferent and the work could get progressively worse. At times it is wise to reprint the poor job as good plant practice as well as to maintain the goodwill of the customer. As a suggestion, the pressman working next to the pressman who did the poor job might be given the poor job to print over again. The second man will likely do his best to turn out a better job and the pressman next to him won't forget the lesson.

The plant should also maintain good ink consumption records. This will permit the estimator to compare printed press sheets with jobs which are being estimated to get a basis for estimated ink consumption of similar jobs.

An advantage of offset over letterpress is the opportunity to fix broken letters on press plates while they are on the press. Areas can also be added or deleted from the plates to provide better color register.

Do not be discouraged if your offset quality does not approach your letterpress quality when beginning combination operation. The best of present day offset work is equal in quality to the best of present day letterpress work, with the added advantages of quick makereadies, faster presses, and rapid and efficient handling through the plant of many types of work.

No. 21,000 Miehle Vertical Shipped—Marking a milestone for the Miehle Vertical was the recent shipment to the Graphic-art 57 Exhibition held at Lausanne, Switzerland, of Vertical No. 21,000. In making the announcement, The Miehle Printing Press and Mfg. Co. Div. of Miehle-Goss Dexter, Inc. stated that this established a record for job cylinder presses. Shown in the photo are, left to right: Charles Dieball, shipping department; Paul Milligan, sales department; the Miehle Vertical No. 21,000 ready for shipping, and Harry Lauchle, training supervisor.

Justified Type Composition
How 'tis Done on Justowriter

The acceptance of cold composition as a typesetting method in commercial printing is evidenced by the increased amount of work being set on typewriter-like machines. Its utility was recognized last year when the Research and Engineering Council of the Graphic Arts Industry devoted part of its annual meeting to a discussion of different kinds of typesetting for platemaking purposes (see August 1956 issue of *Printing Equipment Engineer*).

A variety of markets for typewriter-like composition has been found in the production of books, manuals, house organs, sales literature, pamphlets, directories, etc. One of the equipments for producing this work is the Commercial Controls Corp.'s Justowriter.

The Justowriter consists of two typing machines (Fig. 1) which are called: Recorder unit (manually operated) and the Reproducer unit (automatically operated). Each is a proportional spacing typewriter. The manually operated Recorder unit upon which the original typing of copy is done also simultaneously punches the tape which is used to operate the Reproducer. This second, or justification typing done on the Reproducer is accomplished by means of a system of code holes punched into the tape (one combination of holes for each letter, word space or line justifying function). In other words, the tape operates the Reproducer automatically. The Reproducer is equipped with a reading mechanism which interprets the tape and automatically types and justifies the type lines in page or galley form on suitable paper.

The end product of the Justowriter may be set in 8, 10, or 12 pt. type face of various styles especially suited for offset or letterpress platemaking reproduction. The impression of each letter is obtained by using one-time carbon ribbon. The characters are proportionally spaced from 2/32 in. to 5/32 in. in increments of 1/32 in. Bold face and italic effects (produced separately) may be stripped into the negative.

The Justowriter Reproducer unit is designed to type 572 codes per minute, or approximately 100 words per minute. The number of lines which can be typed in an hour is solely dependent upon what point size type face is being used. For example, Commercial Controls claims that in the 10 pt. Modern type face the machine, if it were running continuously, could type 600 lines measuring 5 in. wide in one hour.

It is not the intent here to include all descriptive details involved in operation of the equipment but to simply indicate what can be done with the two units and how it can be done. To begin with, the Recorder unit is manually operated in the same manner as any conventional electric typewriter. It produces a trail copy to determine the normal length of a typed line. At the same time that a character is being typed or a function operated, a code hole combination is punched into a paper tape. As each line is completed, justifying information is also punched in the tape as indicated by the operator. This justifying information enables a line to be expanded or contracted to the desired length when it is retyped on the Reproducer unit.

Word Spacing

The word spacing in both the Recorder and Reproducer is accomplished by means of a variable escapement mechanism that is used for proportional letter spacing. The normal word spacing, as a result of operating the justifying space bar on the Recorder, is two units. When justifying on the Reproducer, the word spacing may be one, two, three, four or five units, as required. (One unit is 1/32 in., 1/36 in. or 1/48 in.)

Expansion and contraction of word spacing in a line is accomplished in multiples of one unit spacing. Also, the maximum number of word spaces that can be expanded or contracted is eight. Thus, if a line contains more than eight word spaces, the ninth, tenth, etc., word spaces will be a normal two units.

An example of a line typed on the Recorder and the justification of the same line when automatically typed on the Reproducer is shown in Fig. 2. There are eight word spaces in the line and the trial line is 18 units short of zero for a 5 in. line (5 in. line is 160 units or 32 units to the inch). The line is automatically expanded 18 units in the Reproducer by adding three units to the first two word spaces and two units to each of the remaining word spaces. Therefore, the total units in each word space is five units in the first two, and four units in the remaining six word spaces.

All this is accomplished automatically by the Recorder's apparatus which selects a particular justification control code to be punched in the tape. Also, when the tape is read in the Reproducer, another apparatus translates this control code to automatically select the proper number of word spacing units at the start of the line and the point, if any, where this word spacing value decreases.

Code System Explained

Three codes are used on the Justowriter tape for the letter characters and functions (see Fig. 3). In addition, a justification code is used at the end of each line. The first part of the code will always be a No. 7 hole combination. The second part of the code will always contain the 6-7 holes plus any combination (a maximum of 30 combinations) of 1 through 5. It contains the necessary justification information for conditioning the Reproducer to expand or contract a line the necessary number of units. The third part of the justification code will always contain a carriage return code which consists of the Nos. 3, 5 and 6 holes. The above three codes are automatically perforated

Fig. 1—The Justowriter, designed for producing typewriter-like composition, consists of two typing machines. At left is the Recorder unit (manually operated) and at right is the Reproducer unit (automatically operated).

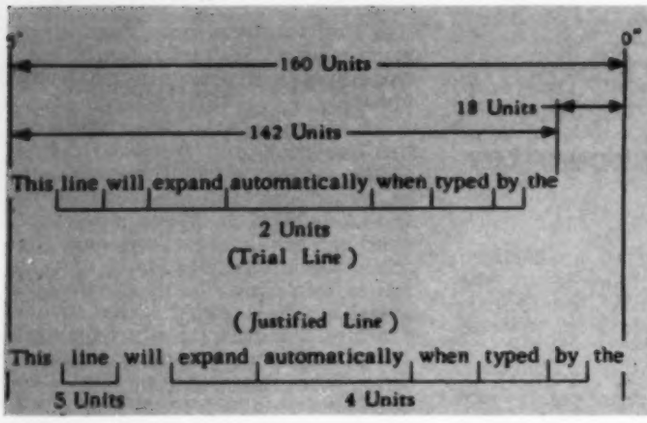


Fig. 2—An example of a 5 in. line showing unit counts typed on the Justowriter Recorder and the justification of the same line when automatically typed on the Reproducer unit. Selection of proper justification code is accomplished automatically by an apparatus in the Recorder.

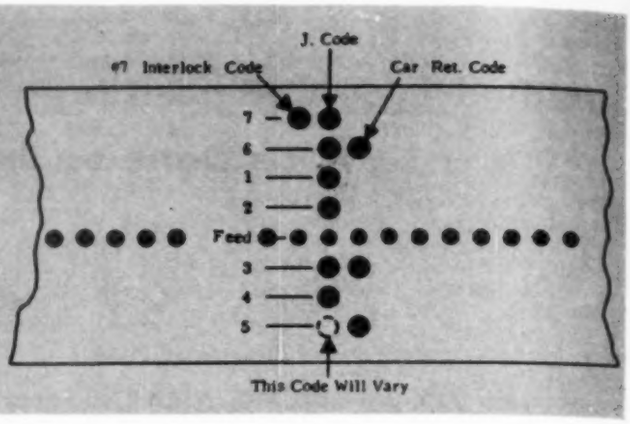


Fig. 3—Three codes are used on the Justowriter tape for the letter characters and functions. They are the interlocking codes for the two reading heads of the Reproducer, a justification (J) code for conditioning the Reproducer to expand or contract a line, and a carriage return code.

in the tape when the operator reaches the end of a line and depresses the J-carriage return switch.

The No. 7 code hole combination is used as an interlocking code for the two reading heads of the Reproducer double reader. The front reader is called the print reader while the back reader is called the J- or justifying reader. Each line in a tape is always fed through the J-reader before feeding through the print reader. Therefore, the No. 7 code in each line insures that the justification code will always be read first, thus conditioning the Reproducer for proper justification before any codes in that line are read by the print reader. This interlock holds true no matter how much the lines vary in length.

Returning for a moment to the second part of the justification code, the 6-7 code, when read by the J-reader, will start print reader operation. Also, the 1 through 5 code units will condition the Reproducer to justify the line.

The latter or second position justification code can be broken down into two more groups. The 1 and 2 code units determine what the first or starting word space will be in a line (see Fig. 4). Because there are two code units involved, there are four possible combinations of tese code units. These four combinations correspond to the four possible units of escapement for a starting word space. They are as follows: If a 1-2 code is in the tape, the starting word space will be five units. With a No. 2 code in the tape, the starting word space will be four units. A No. 1 code in the tape will give a starting word space of three units. With neither the Nos. 1 or 2 codes in the tape, a normal spacing of two units will be the starting word space.

The 3, 4 and 5 code units of this code position will determine when the units of word spacing will decrease (see Fig. 5). In other words, these codes condition the Reproducer to automatically decrease the starting word space by one unit somewhere after the first word space and before the eighth word space.

These three units of code provide eight code combinations. The table in Fig. 5 shows these eight combinations plus the results of each. For example, if a 3-4 code was read in the J-reader, the Reproducer would be conditioned to decrease the starting word space by one unit after the second word space operation for that particular line.

The third position of the pustification code always contains the 3-5-6 carriage return code which when read by the print reader in the Reproducer will return the carriage and index the platen for the next line.

The Justowriter Recorder

The Recorder or typing unit is equipped with a proportional spacing mechanism, tape punch and code selector. Operation is similar to that of a typewriter except that a selector slide causes the punching of the perforated paper tape.

As each line is typed on the Recorder, the tape hole counter is provided to insure that the distance between each justification code is at least 3 in. This is necessary for proper operation of the J-reader and print reader in the Reproducer (the distance between the two reading stations is 3 in.).

The code computer mechanism is a device which operates to select one of 30 different justification control codes which correspond to the number of units a trail line is shorter or longer than the desired justified length. This selected code also corresponds to the number of word spaces in the line. The code computer is mounted on the Recorder as a unit to the left rear base frame at the rear of the carriage to work in conjunction with a computer code bar assembly which is mounted on the carriage.

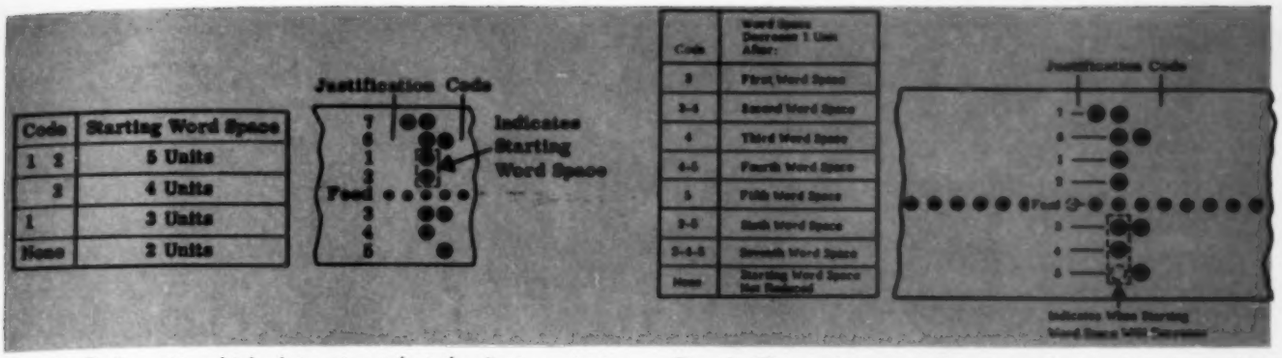
The justification control information is in the form of a five unit code and accordingly there are five sets of contacts on the computer. The maximum justification that can be obtained is plus 22 units to minus 7 units with at least eight word spaces in a line. This, then, would be the maximum limit for the justification zone. The minimum justification zone extends from plus 3 to plus 1 units from zero which results from a line with one word space only. Thus the extent of the justification zone depends upon the number of word spaces in a line.

Another function of the computer is to count and store the number of word spaces in a line.

The Justowriter system is designed so that a code can be set up and perforated in a tape which represents the information necessary to condition the Reproducer to add or subtract units of word spacing in a line. A line delete switch is provided on the Recorder which, when depressed, will perforate all seven code units in the justification code. This code, when read in the Reproducer, will condition the Reproducer to ignore all the codes in the preceding line, thus the line will be deleted. This is a useful function in the event an operator makes a mistake.

The Justowriter Reproducer

The Reproducer consists of a writing machine (typing mechanism), a double reader, code selector and code translator. The double reader is provided with two sets of single reader component parts resulting in two separate readers mounted on one base. Therefore, the double tape reader consists of two reading stations, rear and front which are identical in structure insofar as the number and control of reading pins are concerned. The rear reader is af-



Code	Starting Word Space
1 2	5 Units
2	4 Units
1	3 Units
None	2 Units

Fig. 4—Code units which determine what the first or starting word space will be in a line are shown on Justowriter tape above. At left is table which shows four possible combinations of these code units.

Code	Word Space Decrease 1 Unit After:
3	First Word Space
3-4	Second Word Space
4	Third Word Space
4-5	Fourth Word Space
5	Fifth Word Space
3-5	Sixth Word Space
3-4-5	Seventh Word Space
None	Starting Word Space Not Reduced

Fig. 5—The code units shown on Justowriter tape above determine when the units of word spacing will decrease. The table at left shows eight combinations of the code plus the results of each.

fected only by codes having a No. 7 hole and is referred to as the justification reader. The front reader is affected by the printing codes consisting of combinations of holes from Nos. 1 to 6 and is referred to as the print reader.

In the Recorder operation, at the end of each line a No. 7 code hole is first punched alone followed by a code including the Nos. 7 and 6 holes, plus a five unit code representing the justification control. Accordingly, as the justification section of the double reader reaches the end of the first line, it will first read a No. 7 code hole alone. When the print reader is not operating, the reading of the No. 7 code hole in the J-reader will not stop operation of the J-reader. It will stop operation of the J-reader, however, if the print reader is operating.

Next code read by the J-reader consists of the Nos. 7 and 6 code holes along with the five unit justification code. When the 7 and 6 code holes are read, the print reader will automatically start operation. At the same time, the five unit justification code is read along with the 6 and 7 code holes which will energize storage relays related to the holes in the justification code.

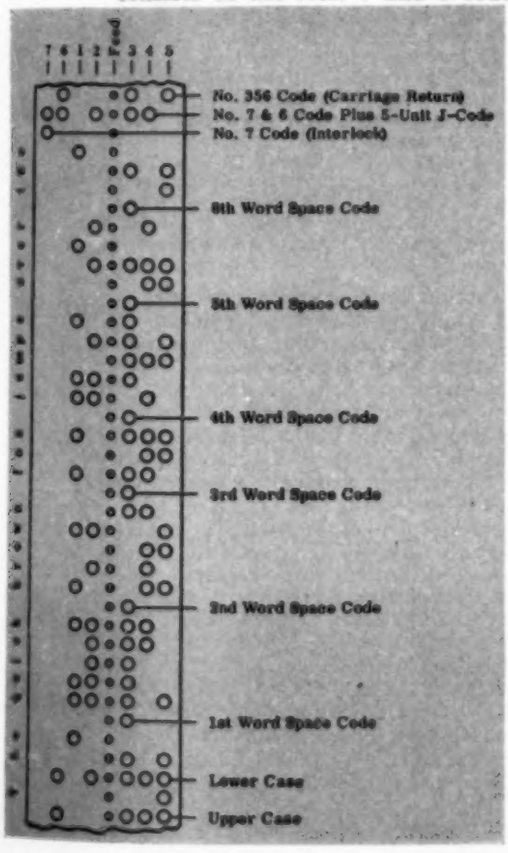

Feed
7 6 1 2 3 4 5
No. 356 Code (Carriage Return)
No. 7 & 6 Code Plus 5-Unit J-Code
No. 7 Code (Interlock)
6th Word Space Code
5th Word Space Code
4th Word Space Code
3rd Word Space Code
2nd Word Space Code
1st Word Space Code
Lower Case
Upper Case

Fig. 6—Example of the justification code on the Justowriter tape. See story for detailed explanation.

The operation of the print reader will read the six unit codes and accordingly control the translator and effect automatic operation of the Reproducer to print the line. The print reader, however, does not cause printing operation in response to any code employing the No. 7 code hole.

The control circuits for the two readers are so interlocked that if the justifying reader reaches a No. 7 code hole in the tape while the print reader is still operating, the justification section will be stopped until the printing section reaches a No. 7 code hole. On the other hand, if the print reader finishes the line and reaches the No. 7 code hole while the justifying reader is still operating, the print reader will be stopped until the justifying reader reaches the next No. 7 code hole.

Reproducer Word Space Control

When a No. 3 code hole is read by the print reader in the Reproducer, the space bar key lever is automatically operated. The resultant selector slide operation does not directly select operation of the escapement magnets, but instead, controls three normally open contacts called word space contacts. Two of the three word space contacts control the circuits for energizing the escapement magnets, and the other controls a word space relay. Therefore, the extent of spacing between words can be varied between one unit and five units to effect justification and is under the control of two storage relays and the stepdown relay.

For a summary of the manner in which justification is controlled in the Reproducer, the following example will be helpful (see Fig. 6). Suppose a line having six word spaces is eight units short of the desired length. It will, therefore, be necessary to add eight units between the words of this line in order to achieve complete justification of the line. The code of the above condition consists of the 2, 3 and 4 codes. The No. 2 code will control the number of units by which the words will be spaced during the reproduction of the initial part of the line. The No. 2 code, according to the chart in Fig. 5, will cause two of the escapement magnets to be energized during the first word space operation, thus causing four units escapement of the carriage. The 3 and 4 codes indicate after which word space the reduction in spacing in units will take place. Therefore, according to the chart in Fig. 5, the word spacing will reduce one unit (from four units to three units) after the second word space operation.

In the example, there are six word spaces having a total of 12 normal units of spacing between words. Since the first two word spaces will be four units or a total of eight units, and the next four word spaces will be three units or a total of 12 units, it follows that a total of 20 units will be provided in the six word spaces.

A non-justifying provision is made on the Reproducer so that the machine can produce non-justified lines. When the switch is depressed and the tape is in the print reader, only the print reader operates, reading and producing a non-justified line.

An end line switch is also incorporated when it is desirable to stop the machine for a long time and turn off the main power switch when a length of tape still remains in the readers.

Craftsmen Officers—Newly-elected officers of the Intl. Craftsmen's Assoc. are, left to right, seated: Albert L. Kolb, Printing Dept., Marine Trust Co., Buffalo, N. Y., vice president; Ferd Voiland, jr., Hall Lithographing Co., Topeka, Kan., president; and Mark H. Carothers, Printing Dept., First National Bank, Dallas, Tex., treasurer. Standing: Governors Ernest Ducharme, Beissel Company, St. Paul, Minn.; Gordon T. Matson, Modern Typesetting Co., Los Angeles; Thomas L. Cooper, Southern Photo Process Engraving Co., Atlanta, Ga.; Floyd C. Larson, Intl. Assoc. of Electrotypers & Stereotypers, Cleveland; Alfred T. Peters, Peters Printing Co., Utica, N. Y.; and Robert M. Edgar, Neyhart Printing Co., Pittsburgh, Pa.

Technological influences unfolded for Craftsmen

By MacD. SINCLAIR, *Editor*, and ED OWEN, *Associate Editor*

As usual, in the case of dominantly technical Graphic Arts meetings, *Printing Equipment Engineer* is reporting only the technical features of the Buffalo, N. Y. Intl. Craftsmen's convention. Among the many highlights of the Buffalo convention was the elevation of Ferd Voiland, jr., president, Hall Lithographing Co., Topeka, Kan., to the Intl. presidency. Voiland formerly was State Printer of Kansas. (See photo for other elected officers.)

The reported 1085 Craftsmen registration also figured in the top convention news. Buffalo registration exceeded the 1060 Cleveland 1937 convention but did not reach Chicago's 1950 exposition registration which was 1230.

Universal expressions of praise were heard regarding management of the Buffalo meeting by General Chairman Earl Hershberger and his capable committee.

It was again demonstrated that Craftsmen don't lack for speaking talent. Outside of a limited number of dependable standby speakers, the program was dominated by new people who discussed particular printing plant production problems and processes.

Speakers passed along pertinent information regarding some of the most important technical subjects in today's Graphic Arts plant operation. Craftsmen who wanted to know, got authoritative information about phototypesetting and photocomposition, letterpress pre-makeready, what the letterpress printer faces in entering the offset field, modern methods for the letterpress pressroom, production procedures, silk screen and quality control.

The 1958 Craftsmen's convention will be held at Hotel Statler, Detroit, Aug. 10-13, according to an announcement by A. Ted Annen, vice president, Shelby Photoengravers Co., Detroit, who will serve as convention chairman. The Buffalo convention voted New York, N.Y., as the 1959 convention city. The convention will be held in conjunction with the Educational Graphic Arts Exposition scheduled for the Coliseum, Sept. 6-12, 1959. Chairman of the New York convention will be Edward Blank, assistant to the president, Publishers Printing-Rogers Kellogg Corp., Long Island City, N. Y.

Manufacturers Show Printers How to Cut Press Down Time

Improvements in the letterpress process made recently by manufacturing and supply firms were demonstrated in dramatic fashion to Craftsmen attending the International Craftsmen's Assoc.'s Buffalo convention last month. The presentation was by far one of the outstanding hits of the convention's technical program. Live demonstrations were conducted by skilled operators on four Miehle V-50 Vertical presses, a 3M Makeready Machine, and a Fairchild Scan-A-Sizer electronic engraving machine. Chairman of the meeting was Albert L. Kolb, newly-elected Intl. vice president, and manager, Printing Dept., Marine Trust Co., Buffalo, N. Y.; moderator was Carlton Mellick, vice president—sales, Miehle Printing Press & Mfg. Co.

In his introduction of the program, Mellick rapped letterpress printers for being "rather complacent about their own process" and for not taking advantage of the many improvements which have been introduced in the industry.

He later made reference to obtaining maximum production on each individual job, regardless of process, when new, modern equipment is installed. To demonstrate his point, he took as an example Miehle's Vertical press and said: "A printer will replace an old V-36 Vertical with a new V-50, but is satisfied to run the new press at the same speed at which the old one operated, even though the manufacturer rates it at 40% faster."

Planning is Cheap

Mellick also stressed the importance of modern methods of preparation to be used in letterpress which will reduce down time between jobs and reduce the overall cost of getting a job ready and running on the press. He commented: "In the offset process, planning ahead is a necessity. All corrections and changes have to be complete before the printing plate is made. The very nature of the offset process has made it necessary to prepare and position each of the components in advance. This has not been a requirement for the letterpress printer and as a result, jobs arrive at the press in a condition that requires a great deal of corrective work before printing can start. Press time is expensive, but planning is cheap."

He added: "If pre-planning can be done for offset printing, it should be possible to improve this condition in letterpress. And if the letterpress printer will think ahead in terms of individual jobs, his costs can be materially reduced."

Dow Etch Process Figures

One of the participants in the clinic was Harold W. Croisant, sales engineer, Dow Chemical Co., who explained the benefits of magnesium for letterpress printers. He reviewed the methods of making magnesium, history of magnesium in photoengraving, its characteristics, and the Dow Etch Process.

Referring to the Dow Etch Process, Croisant revealed there are now 166 users in the United States and other countries, and 268 Dow Etch Machines in use. The breakdown on these figures is as follows: Commercial and private plants (United States and Canada), 93 users, 147 machines; newspapers (United States only), 41 users, 88 machines; European shops, 32 users, 33 machines.

Other points in his talk were: The Dow Etch Process is being adapted so that the etching of curved plates, either as segments or cylinders, can be done quickly and economically. Photographic typesetting and photoengraved magnesium printing plates are gaining popularity in book printing plants. The step-and-repeat method of making multi-image plates has proven to offer economies in both the carton and label printing branches. Magnesium is being made available in all sizes and shapes the Graphic Arts will need.

Adaptation of the three-color process by letterpress printers was briefly described by Robert G. Post, Short Run Color Corp., Cleveland. This has been accomplished, he said, by further development of darkroom equipment, using special screens, and formulating three-color letterpress inks.

Post emphasized three-color printing has quality in its own field. He added: "We do not imply we will accurately duplicate color; but with the three-color process, we can give the customer a pleasing rendition of color. In our sales, we have found that for every customer who can afford the price of quality four-color, there are 20 customers who can, and will, pay the price for quality three-color."

Conducts Makeready Survey

To prove there are too many variables in present makeready methods, another speaker, Melvin L. Gebhard, technical director, Printing Products Div., Minnesota Mining & Mfg. Co., disclosed the incomplete results of a study on makeready times and procedures conducted by his company.

The study consisted of having 16 reputable letterpress plants makeready and run 16 identical 11 in. by 13 in. electrotype plates, mounted on metal, and composed of halftones, solids, reverses and type. Each plant used hand cut makeready; none used 3M makeready. Each was asked to run 500 sheets on a good white 70 lb. book stock using black ink of their own choice. Each test was run on a standard letterpress. Makeready time was figured from the time the plate had been underlaid, registered and the ink set, until the job was running.

Results were: Average experience of pressman running the job was 31 years. Cost of the job varied as much as $119.16. In other words, there was a spread of $119.16 between the highest price for the job and the lowest. Actual makeready time varied as much as 4 hrs. among printers, with the average time consumed being 1 hr., 50 min.

Edward P. Tracht, manager marketing and sales, Fairchild Graphic Equipment, Inc., hit back at critics of letterpress for its lack of progress. He said the newest of all sciences—electronics—is firmly entrenched in letterpress printing. He named a

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Among the Large Attendance at Buffalo for Craftsmen's Convention

(All names read from left to right)

Left: All of this group are from Buffalo: Charles Freytag, Printing Dept., Erie County Savings Bank; William J. Pleger, Pleger & Stevenson, offset printers; William Herbold, partner, Herbold Printing Co.; Bernard V. Malinowski, BVM Advertising Service; H. Carroll Jamerson, representative, Alling & Cory Paper Co.

Center: Boosting Detroit as the 1958 Craftsmen's convention city were: George Glaeser, Michigan Electrotype Co.; Ted Annen, Shelby Photoengravers Co., chairman of next year's convention; Ken Bancroft; Earl Bierbauer, The Baring Press; Emmett Harrington, Beaute Craft Supply Co., and President of Detroit Club; and Charles LaTour, president, Lansing Club.

Right: Miehle press demonstrators were Carlton Mellick, Harry Lawrence, Harry Lauchle and Richard Suda.

They Came from Many States to Attend 1957 Craftsmen's Convention

(All names read from left to right)

Left: Earl Hershberger, convention general chairman, and manager, The Hilton Press, Buffalo, N. Y.; Harry Kenes, Wilson H. Lee Co., New Haven, Conn.; Emmett A. Harrington, designer, Beaute Craft Supply Co., Detroit.

Center: Georgians boosting their city for the 1960 Craftsmen's convention were: Frank Cheatham, Interchemical Corp., Printing Ink Div.; William C. Woollen, Ad Design Studio; and Warren Taylor, general manager, Atlanta Graphic Service Div., Electrographic Corp.

Right: Louis Croplis, ATF Eastern District Mgr., New York, N. Y.; Don Chester (retired) Philadelphia; Harry C. Link, manager, Link Printing Co., Philadelphia; Henry Schneider, secretary, Charles Francis Press, New York, N. Y.; C. Harold Lauck, superintendent, Journalism Laboratory Press, Washington and Lee University, Lexington, Va.

Phototypesetting and Composing Discussed by Craftsmen's Panel

The clinic, ***My New Composing Room,*** was held as part of the Buffalo International Assoc. of Printing House Craftsmen's convention at Hotel Statler, Buffalo, N. Y., Monday August 5. Kenneth R. Burchard served as chairman of the meeting. Burchard also is the Craftsmen's International Technical Chairman as well as assistant dean of Printing Management School, Carnegie Institute of Technology, Pittsburgh, Pa.

The speakers at the meeting covered the newer typesetting methods (as distinguished from hot metal typesetting) both by photographic and typewriter-like means as well as composition and also use of modification camera techniques.

Phototypesetting Equipment Reviewed

The first speaker was Gordon R. Ewing, manager, Administrative Engineering Dept., R. R. Donnelly & Sons Co., Chicago, who discussed ***Review of Cold Composition Methods.*** Ewing stressed there is an important difference between pieces of equipment and composing room methods or systems. He said we must keep in mind that composition is basically a system of procedures and methods which coordinate men, equipment and materials in order that customer's copy can be transformed to a form that is suitable for the pressrooms. Continuing, he said: "Ideally, of course, what we would like to do is to transform information contained in customer's copy to pressroom at lowest possible cost, highest possible quality and in the shortest possible time. This is a goal we never reach but one that should serve as an objective."

Because of variations in the printed product there is no one composition system that will meet all of our individual requirements. The input to our system which is the customer's copy, can range from a handwritten note to punched tape. The pressroom process selected to do the work exerts an influence upon our composing room and its system. In a composing room it must be understood whether or not it is to be designed for the mass production of one product or one which a large number of different kinds of jobs can be handled in it.

The speaker analyzed the various elements, particularly those of a fixed nature, to which to pay attention in formulating a new composing room. The conditions he mentioned were: Input into the system, customer's copy, output that will be required by the pressroom, time requirements, the feedback to the customer and his policy with regard to revisions and alterations, and any other condition dictated by the customer.

The next step would be to meet these conditions with a custom designed system. The speaker stated: "We should call upon every technique, process and piece of equipment that is available and that can serve our purpose."

He said phototypesetting equipment is in various stages of development and includes many approaches which range from simple hand lettering to the highly complex phototypesetters. Developments in this field have followed two different lines of attack. One is to copy as closely as possible hot metal procedures and methods substituting film and paper for type metal. The other approach is to satisfy the composing room's function by utilizing new techniques and equipment which are completely foreign to conventional practice. In both approaches composition results in a film positive or a film negative which is suitable for both lithographic and gravure printing methods. It has an inherent disadvantage, however, when compared to hot metal for letterpress. A relatively expensive copper or zinc engraving or magnesium plate is required, whereas metal composition can be printed directly on a flatbed press or used by molding, to prepare electrotypes.

The speaker divided what he termed "cold composition" into five classifications: (1) Hand lettering and hand ruling; (2) Handsetting of cold type; (3) Photolettering; (4) Typewriting; and (5) Phototypesetting.

In discussing the first classification, hand lettering and hand ruling, he said, of course, this is a manual operation in which standard drafting equipment and lettering sets are employed. "Obviously," he stated, "it is slow and only a few of the sans-serif type faces can be used."

The second classification, handsetting of cold type, utilizes individual typographic characters of the desired fonts and sizes which have previously been printed on paper or film, either directly or in reverse. A number of such equipments on the market include Artype and Fototype.

The third classification called photolettering consists of composing type photographically on paper or film and then manually trimming and stripping or pasting individual lines in the desired ad or page arrangement. Currently there are four machines available of this type. They are the Coxhead Liner, Filmotype, Typro and Protype. All four are desk-top machines. The speaker discussed the operating characteristics of each. On the Coxhead Liner letter spacing is automatic and the completed print emerges from the side of the machine. In the Filmotype the operator turns a spool rather than a knob and letter spacing is not automatic but results from a manual positioning of each character. In the Typro machine up to 15 different type faces or type sizes can be handled within a line without disturbing the equipment. The Protype, said the speaker, is less of a machine than the other three and is more of a mechanized easel. One of the advantages of this machine is that it is relatively inexpensive and the number of type faces that are available is almost limitless.

The fourth classification, that of typewriting, consists of a typewriter which types on opaque material after which the job is photographed. He mentioned IBM Executive, Coxhead DSJ and Justowriter. (See page 31, *Printing Equipment Engineer,* Feb. 1957.)

Continuing the speaker said: "One of the most serious limitations to typewriting as a cold composition process is the quality of the struck image. Although it is adequate for

many printing jobs, it cannot compare in resolution and uniformity to hot metal."

For the typing of line listings in column and page arrangement he mentioned the Acme Visible Record Photopanels and Remington Rand's Flexoprint. In both cases the process is based on special cards on which the listings are individually typed by one of the machines just described. The cards are fitted into panels manually and leading between listings is dependent upon the design of the cards. These panels can then be photographed to produce either film positives or negatives.

He described briefly the Coxhead Photolist and the Eastman Listomatic cameras which rapidly photograph automatically on film from card copy mentioned above.

The fifth classification mentioned by the speaker was phototypesetting equipment. Those he named were Fotosetter, Linofilm, Monophoto, Photon and the ATF Typesetter. (For story on the Fotosetter see *Printing Equipment Engineer*, page 43, July 1956; for story on Linofilm see page 44, July 1956; for story on the Monophoto see page 42, April 1957; for story about the Photon see page 47, Oct. 1956.)

With respect to the ATF Typesetter being developed by American Type Founders, Inc., he said this equipment consists of two separate pieces. One is a typesetter keyboard on which a typewritten proof and a perforated tape are produced in a manner similar to that of the Justowriter. The second machine reads the tape and automatically produces type composition on film or photographic paper. This equipment, he said, is much less elaborate than the other four and is expected to be sold at a considerably lower price. Several of these typesetters will go out for field tests in the next few months.

Future of Phototypesetting and Photocomposition

In his concluding remarks Ewing commented upon three important conclusions affecting such equipment in the future. He said: "Composing room operations such as layout, page or ad make-up, proofreading and production control often constitute two-thirds of the total work. A successful and effective cold composition

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Executives of Various Plants Tell of Order Handling Systems

On Wednesday morning, August 7, the subject of one of the Craftsmen's convention clinics was: *How an Order is Handled in My Plant*. This was one of the regular clinics to be held by the Craftsmen's Intl. convention at Hotel Statler in Buffalo, N. Y. Thomas L. Cooper, Intl. governor and president of the Southern Photo Process Engraving Co., Atlanta, Ga., functioned as chairman of the meeting. Fred Weyler, president, Artcraft-Burow Printers, Buffalo, N. Y., served as moderator.

It is impossible to quote completely all of the comments made by the various speakers. Some of the main points are reported here. Considerable humor cropped up every now and then in the different speakers' comments. Each speaker described briefly the system used in his plant for handling orders for production purposes. While all of them were similar with respect to detail yet there was considerable variation in the different order forms used. There was ample opportunity for discussion by both speakers and individuals in the audience. The systems described were for use in large, medium, small, specialty and combination printing plants.

The first speaker to be announced was William D. Roesser, president, J. W. Clement Co., Buffalo, N. Y. His subject was: *What the Office Expects from the Order Department*.

In his remarks, Roesser analyzed the various procedures involved in handling Clement's orders as well as the scheduling system. He said that Clement maintains a large scheduling department especially trained to see that an order will go through the plant without a hitch and so that no time will be lost in securing information which is not entered in the original schedule. Orders must be complete and clearly written so that there will be no misunderstandings any place along the line. Materials must be furnished on time at the proper time.

Moderator Weyler, after the conclusion of Roesser's comments, defined a work order and the necessity for it and stated that all employees must understand that the faithful following of an order in the various departments in the plant represents profit for the company and for everyone connected with the plant.

Handling Orders in Specialty Plants

Albert Moore, Besig Litho Division, and Everett Kellogg, Amherst Printing Co., Inc., Buffalo, N. Y., discussed handling work orders in specialty plants. Moore described the equipment used for offset and silk screen printing, tag tying equipment, press for laminating and polishing Vinylite. In describing the system for orders containing instructions going through the plant, he said that if any information is missing in the work envelope, the production department filled in a special blank. Thus, if the quantity of stock or any other detail is missing, the envelope is flagged. Here the expediter enters the picture. The company leans on the expediter for continuous workflow of jobs through the plant. Thus, the expediter keeps jobs flowing from department to department. He checks the plant every hour in the day.

Moore described humorously a revised calendar which he named *Printers' Calendar*. (See illustration, next page, of the calendar with explanatory notes regarding its use.)

Combination Plant Work Orders

Eugene Wink of William J. Keller Co., Buffalo, N. Y., discussed his medium sized combination plant in which letterpress and offset printing is done. The plant sustains 100 employees on the average with 60 additional employees during seasonal periods. The plant handles 75 orders per week. The Keller Co. makes its own offset printing plates.

He discussed the work system in use in the plant and the responsibility of the order planners. Four people are employed in this department.

The work envelope for both letter-

Industry Executives at Buffalo Craftsmen's Convention

(All names read from left to right)

Left: Clevelanders Merle D. Kirstein and Earl Boner, both of Chandler & Price Co., and Intl. Immediate Past Pres. George Wise.

Center: George J. Ryan, president, Weber Engraving Co., Syracuse, N. Y.; Ernest J. Desroches, production manager, L. W. Singer Pub. Co., Syracuse, N. Y.; Robert M. Edgar, Intl. Printing Week chairman and president, Neyhart Printing Co., Pittsburgh, Pa.

Right: Charles A. Safranek, mechanical superintendent, Printing Dept., Prudential Insurance Co., West Orange, N. J.; George Kedersha, representative, Gaetjens, Berger & Worth, Brooklyn, N. Y.; Lou Pasquale, manager, Wood Regen Instrument Co., Nutley, N. J.

press and offset is similar except that the offset envelope is distinguished by printing a diagonal green stripe across one corner.

The order planner supervises the press load board as well as the control card board. The original specification sheet is retained in the office but the carbon copy is fastened to the work envelope.

Large copy is put in a 3 ft. by 4 ft. envelope.

The scheduler studies the work and transfers all jobs to the press loading board. The schedule is pasted to the back of the job or work envelope.

Five Part Order Forms

Everett Kellogg, Amherst Printing Co., Inc., Buffalo, N. Y. described the specialty printing plant with which he is associated. The firm does about $200 thousand business annually. Most composition and plate making work is purchased outside. In his plant the production order form is in five parts. One copy goes to the plant foreman. Another copy is sent to the salesman on the job to check over details to see if everything is OK. In this plant, stock is not cut until after the proof has been OKd.

How Medium Size Plant Handles Work Orders

Herman Knochenhauer of Rauch & Stoeckl, Buffalo, N. Y., medium size commercial printing plant, described some of his company's production operations. The plant employs approximately 80 people. Regular run of commercial work is done both by letterpress and offset. The order sheet is in three parts (yellow, pink and white).

Since a large part of the work coming into the plant is of a rush nature, the order is gotten into the production department of the plant rapidly. The composing room foreman receives one copy of the order blank.

On repeat orders, explained Knochenhauer, a girl clerk checks the order for missing information. "Her job is a dogging job," he said.

On the work envelope in the spaces provided for letterpress or offset, the process by which the job is to be done is designated by a check mark.

Knochenhauer explained he relies on the foreman's ability to add something to every job.

On repeat orders, such as church bulletins, someone in the plant is supposed to know all details connected with the job. On rush orders reliance is placed heavily on the foreman to use his ingenuity. "We just can't take time to fill out an elaborate blank system," he commented.

Large Plant Order Specification System

Robert McGibbon, J. W. Clement Co., Buffalo, N. Y., spoke on the handling of orders in a large plant such as the Clement Co. He commented that since work is accepted from two to three months in advance, the order system is perhaps handled differently than in the average plant.

The estimating department writes shop orders and authorizes the purchasing department to secure paper stock so that it will positively be in the plant on time when the job is ready to be printed.

A shop order is dittoed for 18 departments. The planning department makes up the work sheet. Job tickets for various departments are also made up in the planning department. McGibbon also explained that since the Clement Co. is a large organization no rush orders can be accepted.

Discussion Period

Someone from the floor wanted to know what percent of 120 employees in a plant is involved in handling work scheduling and/or orders.

One executive said that for filling out orders from 3¼ to 4% manpower is required.

Another said that in his combination plant's order department, one out of 18 employees is delegated for this work.

Herman Knochenhauer said that in his plant from 300 to 400 jobs a month are handled and the work

NEG	FRI	FRI	THU	WED	TUE	MON
8	7	6	5	4	3	2
16	15	14	13	12	11	9
23	22	21	20	19	18	17
31	30	29	28	27	26	24
38	37	36	35	34	33	32

Calendar for Printers

We propose this Printer's Calendar as we know it will be a solution to many problems in the printing industry. We believe our present calendar should be revised for present-day use. *Write your Congressman today!*

Here is what the proposed calendar will do for the printers of America and their customers:

1. Every job is in a rush. Everyone wants his printing yesterday. With this calendar, a customer can order his work on the 7th and have it delivered on the 3rd.

2. All customers want their jobs on Friday — so there are two Fridays in every week.

3. There are seven extra days at the end of the month for those end-of-the-month rushes.

4. There will be no "first-of-the-month" bills to be paid as there isn't any "first." The "tenth" and "twenty-fifth" also have been omitted in case you have been asked to pay them on one of those days.

5. There are no bothersome non-productive Saturdays and Sundays. No time-and-a-half or double time to pay.

6. There's a new day each week called Negotiation day. Contracts may then be reopened each week.

Printer's Calendar—A number of "revised" calendars have been developed from time to time. These have been proposed as a means for solving the eternal problem of keeping promised delivery dates. The one shown here was published by Al Moore of Pollack Poster Print, Inc. and Besig Lithograph Co., 877 Main St., Buffalo, N. Y. Moore discussed his plant's system for handling orders after they come into the shop. This calendar, of course, was presented only as a humorous side note at the production clinic, Buffalo (N. Y.) Intl. Craftsmen's convention, Hotel Statler, Aug. 7. A variation of this type of calendar by cartoonist Roesler (although not so thoroughly detailed) appeared in the March 1956 issue of *Printing Equipment Engineer*.

orders are handled by himself and a girl.

It seemed that an interpretation of a customer consists of the salesman who brings a job into the plant. In other words, the salesman is considered a customer, or at least his representative. The salesman acknowledges the order. After consulting with the production department, in some cases, he promises delivery of the job to his customer.

It seemed to be the consensus of opinion at the general discussion by both the speaking panel and executives from the floor that the greatest problem in a plant is how to keep track of work orders so that delivery promises to the customer can be kept.

With respect to the acknowledgment of orders coming into the plant, Herman Knochenhauer said that the salesman makes acknowledgment to the customer. In some cases this acknowledgment consists of a properly filled out post card.

Canadian Printers Support Importance of Premakeready

A clinic devoted entirely to the subject of premakeready—its needs, equipment, techniques and economies—was presented at the Buffalo convention of the International Craftsmen's Assoc. by a group of Canadian printing executives. It was prefaced with remarks by Roy Gurney, superintendent of printing, University of Toronto Press, Toronto, Can., who said: "Premakeready is no mysterious technique reserved for the very large shops but a psychology of management of vital concern to 95% of all printers."

Gurney noted the competition to letterpress coming mainly from photo-mechanical methods of printing and typesetting and admitted ". . . a lot of inventive genius has been expended to perfect them." He said letterpress could do the same to meet this competition and added: "Some of the answers to our everyday problems are on our very doorstep. But, because of our casual approach to new techniques, or maybe a natural antagonism to change, we are inclined to put forth too little effort to benefit from new techniques."

In another part of his talk, Gurney remarked: "Today, premakeready is no longer thought of as a technique reserved for pressroom personnel. It is an approach to improving pressroom efficiency and an approach that affects every person whose daily function in any way has a bearing on the probabilities of a printing form not reaching the press in perfect and proper condition. It concerns the man who orders the engravings, the ink, the paper, performs the typesetting, etc. The list is endless. Pressroom efficiency is affected by factors and personnel a long way removed from the foreman's and superintendent's sphere of influence.

"If pressroom efficiency or premakeready begins outside the pressroom, then whose responsibility is it to see that this routine is set up and functions properly? The answer is simple—management."

Gurney also said: "Premakeready counts most where makeready itself occupies a sizable portion of potential production space. This is, of course, in shops where the runs are shorter, and by the law of averages, these shorter runs occur most often in the smaller shops."

Another speaker, Alan H. Fogg, management consultant from Toronto, Can., asked if premakeready can save money in a large shop which has long runs and makeready accounts for 10% of the time, then how much more money can be saved in a small shop which has short runs and makeready occupies 50% of the time.

In such small shops, Fogg observed, the presses are often second hand when purchased and in doubtful mechanical condition. "It is in these shops," he said, "that we find doubtful standards of accuracy and precision in the preparation of forms. The lower the present standards, the greater the benefits of premakeready."

Fogg held as "utterly wasted effort" the period of preparing a press for printing which consists of compensating for errors and defects of the form, the paper and the press. It is non-productive work, he added, and said: "Much of the traditional skill of the pressman is of this unenviable nature. It consists in the skill of experience in overcoming difficulties and obstacles which never should in themselves have arisen. This is pointless work."

The opinion that the responsibility for establishing and carrying out a premakeready system rests with management, was expressed in a talk by Harris Alexander, plant manager, Rous & Mann Press Ltd., Toronto, Can. He included in this category anyone holding a position as a department foreman or higher, and people who purchase engravings, ink, paper, type, presses, composing room equipment, or any material that helps complete a printed sheet.

"Keep in mind," Alexander said, "that the overall cost (of a job) is what we are trying to improve and that we shouldn't practice economy in one place if it will add to the cost somewhere else." He used the purchase of paper as an example of this. The sheet size should be such as to make for easy handling on the press and so bars can be put into the chases for lockup. Time lost trying to keep a 16 page form square without bars, or trying to control workups in the same form will soon prove more costly than the extra paper involved. Running bleeds to the outside edges will cause extra handling, probably slow down the running time of the press and generally will be a costly operation.

Alexander mentioned a number of places in the plant where premakeready can be practiced. One of these concerned pulling proofs in the composing room. Pulling proofs on soft stock with a heavy impression will not show up broken letters, nor will it do the type face any good. A properly pulled proof will show up any imperfections so that all corrections can be made at one time. He added: "Changing these broken letters can be done much cheaper on the worktop than on the press."

Speaking of the need for good tools and equipment with which to work, the speaker commented: "Inferior material breeds inferior work, and here management again steps in to see that the men are properly supplied."

Alexander also recommended checking the proper thickness of the packing on a press against the manufacturer's specifications to ". . . eliminate any chance that over the years this measurement has gone astray." Another recommendation was to use Vandercook press test blocks. He added: "You might be very surprised with your findings. We were, and very pleased with the results. We now maintain in our permanent packing, compensation for any wear or damage done to the cylinder over the years, and this is a big timesaver on our presses."

He suggested keeping a file of the first press sheets pulled and studying them for points which can be improved by premakeready. Also, compare the first pull with the running sheets to determine if they are being over-madeready.

Press Relations—The trade press was kept informed at Buffalo Craftsmen's Convention by hard-working Intl. Press Relations Chief Floyd C. Larson, who is also executive secretary, Intl. Electrotypers & Stereotypers Assoc., Cleveland. Watching Larson collate sheets for press releases is Morris Reeves, composing room foreman, Government Printing Office, Washington, D. C.

Not Been Thoroughly Tested

The final speaker's role was to answer the question: How can I do all these things in my plant? He was George H. Harper, general printing superintendent, Maclean-Hunter Publishing Co., Ltd., Toronto, Can. One of his first comments was: "This whole matter of premakeready acceptance has not been given a thorough testing in our industry mainly because of our inability to measure

Some of the Craftsmen on Hand for the Buffalo Convention

(All names read from left to right)

Left: Thomas L. Cooper, Intl. Governor, president of Southern Process Engraving Co., Atlanta, Ga.; Robert M. Edgar, Intl. Printing Week chairman, and president, Neyhart Printing Co., Pittsburgh, Pa.; Mark Carothers, Intl. treasurer, and manager of Printing Dept., First National Bank, Dallas, Tex.; Raymond A. Langlois, printing instructor, Eli Whitney Regional Technical High School, Hamden, Conn.

Center: Louis Van Hanswyk, Van Hanswyk Typographers, New York, N. Y.; Peter Slade, United Board & Carton Co., and Herbert Ahrendt, Herbert Ahrendt, Inc., all of New York, N. Y.

Right: Harry Thompson, superintendent, Monitor Publications, Denver, Colo.; J. Homer Winkler, technical advisor, Battelle Institute, Columbus, O.; Carl Nelson, ATF New England manager.

its potential, and our fear that the possible savings would cost more in equipment, materials, in time and dislocation of present methods, as well as the human problem of unsettlement of staffs, than it is worth."

Harper answered his own question: "Where do we, as foremen, fit into this situation? We can start by realizing that we are a part of management. We cannot be impersonal about it. We cannot pass the buck. We cannot refer to management as 'they.' It must always be 'we,' if we have accepted our responsibilities as supervisors."

The speaker held that supervisors must be enthusiastic about a program of premakeready. "If you are not—if you are only lukewarm, you will pass that feeling along to the men who work under you, and they will be lukewarm, too. You provide the leadership to their thinking."

Harper suggested procedure for the introduction of a premakeready system in a plant as follows: Read as much advance information on the subject as possible in trade magazines. Visit other plants and talk with other foremen who are using premakeready. Gather information passed along at a convention. Meet with other foremen in your plant to discuss problems involved. Know what is expected of every department. He said there must be no doubts in the minds of the workers once the system is installed.

Competition Between Departments

The Canadian plant executive continued: "I must keep in mind that competition between departments should be controlled. Competition can make a department go, but it can also be a major irritant, interfering with the job. We used to think that most pressmen considered all compositors as frustrated blacksmiths, and any comp will tell you the main cause of workups on a press is the lousy way the pressman locks the form on the bed. In dealing with other departments, the smart foreman keeps his own preferences and prejudices in check."

To install a premakeready system in the pressroom, Harper said the supervisor is going to have to change an established system. "Pressmen are going to stop doing certain things they've been doing for years. They are going to change the sequence of operations, going to drop some, cut down on others. They're going to work differently. Their whole work pattern is disturbed. They've got to be told why. They've got to be told how. And as their foreman, I have to do the telling."

Thorough maintenance, providing necessary tools and proper record keeping were other points brought out by Harper as requisites in a premakeready system. He closed with the advice: "If you can save an hour in the pressroom, you can afford the worth of that hour somewhere else to do it. Premakeready can be made to pay for itself."

Tools for the Presses

In the discussion period which followed, one Craftsman asked why press manufacturers did not standardize on nuts and bolts used on the machines. Harper was of the opinion that much of this is complicated by the European equipment which also has different threads. He related his company buys extra tools for use by the pressmen and replaces them quickly if lost.

Homer Winkler, Battelle Institute, Columbus, O., thought there should be a clearly defined objective in premakeready for the worker to understand. He said there are too many different requirements in different printing plants for the supplier of materials to cope with. There is a need, he said, for a simple agreement between printer and supplier on what's needed.

Ed Blank, assistant to the president, Publishers Printing-Rogers Kellogg Corp., Long Island City, N. Y., asked for an opinion on the value of makeready teams. Harper replied he personally likes the idea but has found from experience the workers don't. He said his firm has tried the idea but was not successful.

Silk Screen Printing Process Now $1 Billion Annual Volume

The always interesting and colorful Bert Zahn provided what might be considered a one man show at the *Silk Screen Comes of Age* clinic at the convention of the Intl. Assoc. of Printing House Craftsmen, Hotel Statler, Buffalo, N. Y. on Tuesday August 6. Zahn is manager, Graphic Arts Dept., The Glidden Co., Cleveland.

At this clinic, Floyd C. Larson served as chairman. Larson is Intl. Craftsmen's public relations chairman and is also executive secretary-treasurer, Intl. Assoc. of Electrotypers and Stereotypers.

Zahn surprised many in the listening audience when he stated that the silk screen industry has now reached an annual $1 billion. He said: "This figure is not taken from estimating or guesswork statistics but is the annual volume reported by the U. S. Census Bureau in Washington, D. C."

In noting progress that has been made in the silk screen process, Zahn stated: "Up to about five or ten years ago, the printer considered the silk screen process the outlet for short run jobs that could not economically or profitably be produced by the printer. With today's automatic silk screen printing machines, runs from 2000 to 3000 impressions per color per hour are not unusual."

Ten Times More Color Intensity

"Of course," Zahn commented, "the reproduction of color separation jobs with the silk screen method cannot compare to color separation jobs run on the larger presses and in larger quantities by letterpress or offset. Certain types of color separation jobs can be done more vividly, however, with the silk screen method. With the silk screen method, as much as 10 times more color intensity can be obtained."

The speaker commented that one of the deficiencies of the silk screen process is that moire is impossible to get away from in halftone reproductions. A 65 line screen seems to be the minimum fineness of screen

which can be used in the silk screen process.

In silk screen printing, he said, each color on a color separation job must be run separately, dried and succeeding colors printed individually. The speaker reported that new advances in the silk screen printing industry are making runs of 10,000 to 30,000 not uncommon.

He also commented that certain types of reproduction done with the silk screen method are impossible of accomplishment by any other means. For example, Zahn said, the placing of a light color on a dark colored background can be done with extreme opacity.

Quick Ink Drying

Up to a few years ago, the average drying time of a screen process printed job was approx. 15 min. per color. This meant the use of a large conveyor belt or drying racks to permit each color to dry. Zahn reported that with the newer jet drying equipment which is available as well as the new screen inks, this drying period has been cut down to 7 sec.

One of the advantages of the screen process printing is that the screen process plate can be taken to the job for printing. For example, any amount of large upright surfaces, or curved or unusual shapes, can be printed by taking the screen or the plate as it were directly to the objects for printing.

At the last Republican convention in Chicago the silk screen process was utilized for printing designs on the sides of the bodies of elephants. The speaker remarked: "You'd have an awful time getting an elephant to hold still in the press if the job were to be printed by any other process."

Unusual uses of the silk screen printing process have been the printing of designs, messages and insignia on ice cream, cake, turtles, and even on running water.

Wiring Diagrams

He continued, "Instrument panels, radio and television circuits, as well as electrical wiring are being done with the screen process method. In the circuit printing, a metallic conduction type of ink is screened and instead of hours spent wiring a television or radio set, a few seconds produce the same job with the screen process printed cards or panels. Point of purchase displays have meant a tremendous opportunity for the silk screen processor because of the short run involved.

"When exposed to the elements, screen process is known to outlast any other means of reproduction. The printer uses inks which in most cases are fugitive but the screen processor, while he uses a screen ink, it is in reality a paint."

A principal field that has put screen process into the limelight is the use of daylight fluorescent colors, for instance in the printing of 24 sheet posters which are exposed to daylight for continuous periods.

The speaker related that color separation jobs and halftone jobs are being produced by quite a few of the nation's process shops. Of course, he said, the limit of the halftone dot usually is of the 65 line variety. The available maximum size of today's automatic screen process machines is approx. 40 in. by 60 in.

One of the speaker's comments was interesting. This was to the effect that if one dot dropped out of a silk screen plate, at present there is no way of replacing it as can be done in metal plates where the missing dot is built up and hand tooled.

Zahn said well over 1000 members now belong to the Screen Process Printing Assoc., the association having been organized originally about 10 years ago.

With respect to the future of the screen process industry, Zahn stated, "I look for production of up to 1000 to 15,000 impressions per hour with instantaneous drying of the colors and a possibility that any amount of colors can be run at one time.

"I look for a system of making screens," he said, "in which a fine wire mesh screen will be made electrolytically to supplant the present silk screen. I look for improvements in stocks wherein the paper stocks are chemically treated to aid in the drying of colors and inks. The metal screens will last indefinitely. In addition to the improvement in the paper stocks, a metal plate doesn't work with the weather as does a silk screen." He has seen some jobs that were ¼ in. off register and in addition paper shrinks according to the weather further accounting for additional misregister.

Question and Answer Period

During the question and answer period someone wanted to know what caused an "awful odor" on Christmas cards which had been partially processed by silk screen. Zahn replied that the thinner used in the inks was the cause of the odor. He also stated that at present much of the odor has now been overcome so that it is not offensive.

In reply to another question Zahn stated there is no substitute for the silk screen. Nylon fabricated screens have been found wanting. Most efficient production with proper equipment in the silk screen printing plant is 2000 sheets per hour.

In answer to another question, Zahn stated that in his opinion the silk screen craft is not trying to supplant printing of any kind but rather to supply a supplemental printing process. The reason for development of high speed presses is to reduce labor costs.

Quotes

We should all realize that any change of method, anything that departs from the accepted way of doing things, will run into the human factor of resistance to change. About 50% of this resistance is usually just a reflection of supervisory feelings, whether openly expressed, or merely implied.

(George H. Harper, general printing superintendent, Maclean Hunter Publishing Co., Ltd., Toronto, Can., at 1957 Intl. Buffalo Craftsmen's convention.)

Pressroom efficiency is affected by factors and personnel a long way removed from the foreman's and superintendent's sphere of influence.

(Roy Gurney, superintendent of printing, University of Toronto Press, Toronto, Can., at 1957 Buffalo Intl. Craftsmen's convention.)

During the past few years, many combination plants have come into existence and by this I mean many letterpress plants have added offset equipment. Sometimes these companies have a tendency to base their comparison of the two processes on the performance of new offset presses and very old letterpress equipment. Also, when putting in offset presses, a printer will push to get maximum production from them, but when installing a new letterpress, he is content to get the same production as he received from the old press. In other words, it is merely a matter of replacement.

(Carlton Mellick, vice president-sales, Miehle Printing Press & Mfg. Co., at 1957 Buffalo Intl. Craftsmen's convention.)

We acknowledge printing orders by delivering them to the customer ahead of time.

(Herman Knochenhauer, Rauch & Stoeckl, Inc., Buffalo, N. Y., general commercial printers, at 1957 Buffalo Intl. Craftsmen's convention.)

As there is no one hot metal process for all types of work, there will not be one method of cold composition that will solve all of our needs.

(Gordon R. Ewing, R. R. Donnelly & Sons Co., Chicago, at 1957 Buffalo Intl. Craftsmen's convention.)

Printing Week Contest Winners

Winners in the recently conducted contests for 1958 Intl. Printing Week stamp and poster designs have been announced by Robert Edgar, Intl. Printing Week Chairman, Pittsburgh, Pa. Gerry Sturm, Syracuse, N. Y., received top award in the stamp contest. Second and third awards went to Emil George Sahlin, Buffalo, N. Y., and Fred Bernos, New Orleans, La., respectively. Sahlin was awarded first place for his design in the poster contest. Frank Kane, San Francisco, won the second award; Bernos was awarded third place.

Winning designs for the 1958 Printing Week stamp (left) and the official poster (right).

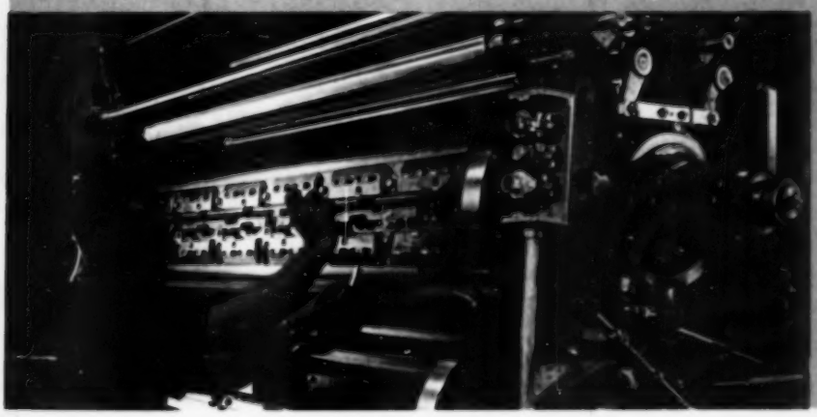
Harris-Seybold broke through the language barrier at the *Graphic '57* international exhibition at Lausanne, Switzerland. The thousands of people who viewed demonstrations of the Seybold Saber® cutter could also listen simultaneously to a commentary in either English, French, German or Italian. Macey Gathering Machines were also demonstrated.

What's going on at HARRIS-INTERTYPE...

aveling from infrared drying oven, a Harris Alum-O-Lith sensitized offset plate is inspected before packaging in the Los Angeles ant of Lithoplate, Inc. (a Harris-Intertype subsidiary). This is the 45½ x 54″ size—largest, heaviest gauge, sensitized plate made.

Running final tests on Seybold Saber cutters at the Dayton factory, craftsmen make detailed inspections before shipment. In the foreground, a Saber with Auto-Spacer is thoroughly checked to insure accuracy and precision.

Stepping up production capacity for labels and point-of-purchase displays, a Harris factory-trained erector helps install a new 43 x 59" Harris four-color offset press at Louis Roesch Company, San Francisco, Cal.



HARRIS-INTERTYPE CORPORATION

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Harris Presses • Intertype Typesetting Machines • Cottrell Presses • Seybold Cutters • Macey Collators • Harris Chemicals • Sensitized Plates • Special Products

HARRIS
INTERTYPE
CORPORATION

Litho in U.S.A. on a Harris Offset Press

Advises Printers Road To Offset Has Problems

Advice to letterpress printers on how to solve the problems they will encounter once they decide to enter the offset field was imparted by two speakers at one of the technical clinics held at the Intl. Craftsmen's convention in Buffalo last month. Chairman of the meeting was A. R. Tommasini, superintendent, University of California Press, Berkeley, Calif. Speakers were: Edward Blank, assistant to the president, Publishers Printing-Rogers Kellogg Corp., Long Island City, N. Y., and Robert J. Niederhauser, manager of sales engineering, Harris-Seybold Co.

Blank confined his talk to suggestions on how the letterpress printer should proceed to add offset his operations. He offered ideas on the size of press to order, whether or not to install camera and platemaking equipment, the matter of obtaining trained men, importance of record keeping, storage of film and plates, and quality inspection. The text of Blank's talk appears on page 27 of this issue.

Niederhauser's talk was based on the experiences of an actual letterpress company which entered the offset field and later went from black and white lithography to producing full-color work. The humorous efforts of "Tom," who was the leading character in Niederhauser's story, and his associates in the new process venture, at conquering different jobs printed by offset were detailed as the story unfolded.

The 'Offset Honeymoon'

Relating the short-lived offset honeymoon, Niederhauser said: "One day everything was fine—and before we knew it, everything went wrong together. First, the plate went bad. We called the trade platemaker, who was in Ohio, I think. He said it would take several days to get a new plate to us. We told him we were in a hurry. He said: 'I sent you the negatives, why don't you make your own plates from them?' We explained we had made some line plates all right, but no halftone plates. He said: 'Just make the halftone plate like you make the line.'

"Well, we made the plate—not the first try, mind you, but we made it. It didn't look exactly like the one we got from the trade house, but it was a plate and it might get by. And perhaps it would have, if it had fit. The first color we had already run on the paper and the second color wouldn't fit it.

"We messed around all day, and finally ended up by cutting the plate with tin shears and running with the plate cut in strips. We got the job off, and somehow the customer took it. It didn't matter that we had exhausted ourselves fighting the job; it didn't matter that we could have run the same job on letterpress without a hitch, and delivered it on time. It did matter, though, that we had met an almost impossible problem and solved it."

As the little offset operation began to grow, different kinds of work were brought into the plant culminating with process color. Starting with 4000 sq. ft. of floor area the plant today occupies 17,000 sq. ft. The volume of business has expanded 21 times what it was when the first 17 in. by 22 in. press was installed.

Niederhauser concluded: "There are no short cuts open to everyone—no simple method of getting into the profitable offset color field. If you're going into process color work in the pressroom, you're going to have to be a professional to stick."

A number of questions from the floor followed the speakers' presentation. One Craftsman asked Blank how he gets large flats to fit into an envelope file system. Only the job's blueprint goes into the envelope file, replied Blank. Flats of a job are kept in a separate file. Both are keyed for locating quickly.

How is valuable artwork filed? Blank said this is set up under a separate file system. He counselled it is wise to obtain a signed detailed receipt, enumerating each piece of artwork, when returning the art to customer.

A member of the audience wanted to know why both speakers encouraged printers to make their own plates rather than use trade platemakers. Blanks answered, "In offset, a planning division must make a complete layout of a job for the platemaker. Following the normal course of events the printer will eventually start making his own plates." Blank admitted, however, the decision is normally dictated by the type of work.

Another plant executive wanted to know how close to original copy must the printer come in offset. Niederhauser replied, if you have top quality craftsmen you'll get as close to original copy in offset as you will in letterpress.

How many proofs are required in offset? Blank said it was rare that the first proof from the platemaker will give you what you want. Where you see it can be improved you are entitled to a second proof. Frequently, he said, exact matching of color is not important to the customer and he will accept the job without further correcting the plate.

Blank was asked about pulling good quality reproduction proofs. He said they use a dull coated paper and pull repro proofs on a Miehle Vertical press. He said the kind of paper for repro proofs depends upon what the cameraman wants.

There was also a question about storage of plates. Blank said if they are taken care of properly offset plates can be run successfully again. It is easier, however, to store the film flats.

Don't Expect Big Things

(From a talk given by George H. Harper, general printing superintendent, Maclean-Hunter Publishing Co., Toronto, Can., at the Buffalo convention of Intl. Craftsmen's Assoc., Augut 1957.)

Don't expect big things from the installation of a premake-ready system. Give me 10 extra i.p.h.—8 hrs. a shift, 2 shifts a day, 5 days a week, 52 weeks per year. At the end of the year, I'd have picked up 41,600 impressions. If I were operating 10 or 12 presses and could knock out some of the non-productive time, I could pick up a couple of hundred thousand impressions a year, which is enough to warrant asking the boss for a raise anytime.

A Few of the 600 Craftsmen at Buffalo Convention

(All names read from left to right)

Left: Clarence G. Rohrich, president, Akron (O.) Engraving Co.; Harold G. Crankshaw, technical school instructor, Washington, D. C.; M. F. (Mac) McGrew, production, Ketchum, MacLeod & Grove, Pittsburgh, Pa.

Center: Mark Carothers, Intl. treasurer, and manager, Printing Dept., First National Bank, and John Scott Composition Co., both of Dallas, Tex.; William Bell, production manager, Standard Publishing Co., Mt. Healthy, Ohio.

Right: George D. Daughraty, superintendent, Benham Press, and Corwin Swift, manager, Sam'l Bingham's Son Mfg. Co., both of Indianapolis, Ind.; Maurice Sternberg, production manager, Barger Box Co., Elkhart, Ind.

Quality Control Solves Problems

Two widely separated subjects—economics and quality control, were discussed at one of the final clinics held at the Intl. Craftsmen's convention in Buffalo, N.Y. last month. *Visual Economics in the Graphic Arts* was the topic handled by Willard E. Brown, assistant vice president, Judd & Detweiler, Inc., Washington, D. C., while William M. Cranston, quality control manager, Western Printing & Lithographing Co., Poughkeepsie, N. Y., spoke on *Introduction to Quality Control.* Moderator of the session was Gordon T. Matson, owner, Modern Typesetting Co., Los Angeles, who is also an Intl. governor.

Cranston's talk concerned how statistical quality control has helped solve operating problems at WP&L and at the same time provided economies in materials used in the plant. He told how to properly select and inspect a relatively few pieces from a large lot and how to make a relatively accurate prediction as to whether or not the shipment comes up to specification. Another part of his talk concerned the inspection system. How defects are rated, how they are classified, and what additional use is made of this information. Cranston's presentation will appear in an early issue of *Printing Equipment Engineer.*

At the close of his presentation, Cranston was asked if WP&L uses girls for its quality inspection operation. He replied in the affirmative and added the women inspectors undergo a two week training period. He also said women are more satisfied than men with the routine job. It was his opinion there is a psychological effect in testing. The workers know they are going to be checked on the work they produce and strive for the best results.

What method is used for color control, especially for checking the color on re-runs? Cranston said they do not rely on instrument measurement of color. Reliance is placed on skill of visual measurement. Also, inspectors check color under the exact lighting conditions of the pressman who is running the job.

What part does quality control play in handling complaints from customers? The quality control department will make an "audit" of the customer's job and show him the types of defects it found. His department, said the speaker, will answer complaints and provide a fair evaluation. He added: "It will not be a colored answer, either."

Supplymen Elect Officers

New officers of the Intl. Printers Supply Salesmen's Guild elected at the organization's annual meeting held last month in Buffalo are as follows: Myron F. Lewis, *Graphic Arts Monthly,* president; Louis A. Croplis, American Type Founders, first vice president; Herbert L. Mitchell, *Graphic Arts Monthly,* second vice president; Francis J. Tominey, *New England Printer and Lithographer,* secretary; and Charles S. Tompkins, treasurer.

Changes Name to Institute—Because the printing education program at the Southern School of Printing has been broadened to cover more nearly the needs of the printing industry, the school's name has been changed to the Southern Institute of Graphic Arts. The change in name was authorized by the board of directors of the Southern Graphic Arts Assoc., the governing body of the school, and approved at its annual convention last Spring. The present training program includes hand composition, machine composition, letterpress presswork and courses in photolithography. For many years the institution has been jointly sponsored by the Southern Newspaper Publishers Assoc. and the Southern Graphic Arts Assoc.

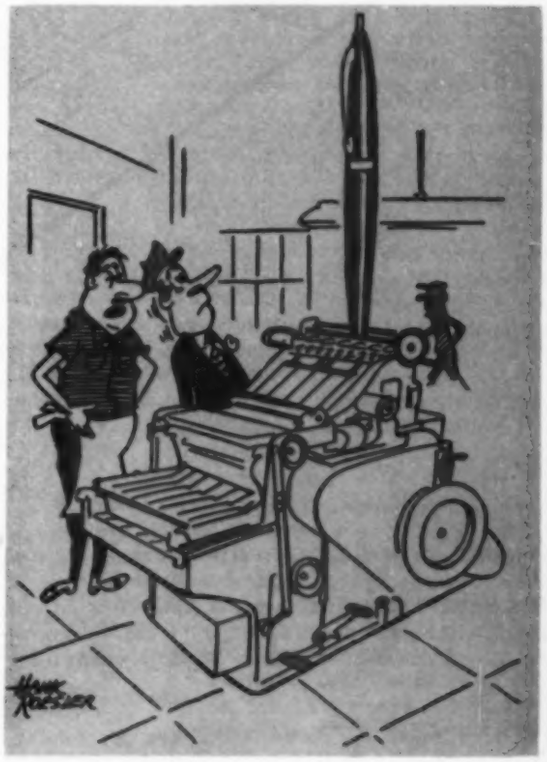
Letterhead Contest Winners

Whiting-Plover Paper Co. announces the grand award winners in its second nationwide Plover bond letterhead competition. Twelve printers and 12 paper salesmen, including five repeat winners, received an all-expense-paid Wonderful Week End in Wisconsin, Sept. 4 to 8.

The 12 grand award printers are: Frank Shirvis, Westlake Press, Inc., Chicago; Gordon Hughes, the Jarvis Press, Dallas; Howard Bush, Neosho Printing Co., Neosho, Mo.; Robert Trogman, Creative Printing Co., Los Angeles; Fred Austin, Industrial Lithographers, Glendale, Calif.; Harry Timmins jr., Harry L. Timmins Printing Co., Hollywood, Calif.

Also, Wayne Smith, Holden Printing Co., Minneapolis; Edward Mayer, James Gray Inc., Howard Stackler, Paul Stackler Co., and Murray Fauer, Manhattan Stationery Co., all of New York, N. Y.; Richard Mills, James H. Barry Co., San Francisco, Calif.; William C. Finger jr., Northwest Printing & Lithographing Co., Seattle, Wash.

"It's a piggy-back ink fountain."



New Home for Falco Corporation—The Falco Corporation announces removal of its Eastern plant, offices and warehouse to a new building in Flushing, N.Y. The building comprises 25,000 sq. ft. working area of one floor layout, over twice the space of the old building. Included are expanded machine shop, enlarged warehouse and office space.

Flint ROP Color Book Ambitious Presentation

In a two-section presentation, Howard Flint Ink Co. shows the various newspaper ROP color printing inks available from that company. Colors match those approved by ANPA-AAAA standards.

In the first section are shown the 12 ANPA-AAAA approved colors. Each newsprint sheet is die cut along the right side to permit instant location of any particular color. On each sheet, blocks are shown in 100% (solid), and in screened 50 and 25% strength. Also shown on each sheet is a block of color printed solid but tinted to 50% strength with Arrowhead White B-956.

In the second section of the book are shown 40 Arrowhead colors each page of which is die cut along the bottom edge for quick location. These inks, too, are shown in 100% (solid) and in screened 25 and 50% values.

Customers may mix their own inks for color matching with Arrowhead White or the firm will supply the inks already mixed and ready for use. For those who prefer mixing the inks themselves, charts will be provided to customers.

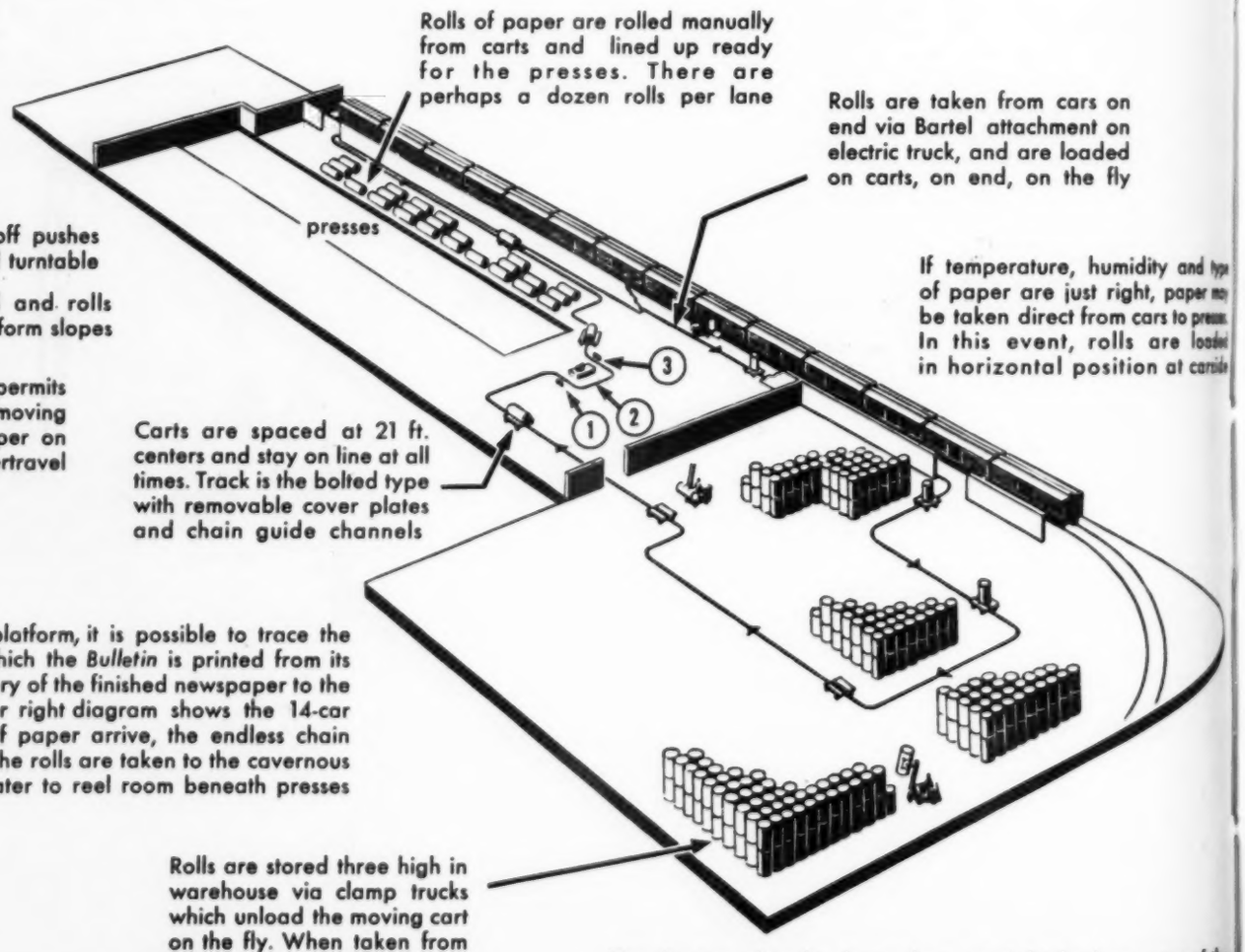
Flint advises the firm will be glad to send a copy of the *Newspaper ROP Color Selector* upon request to newspaper production men, advertisers and agencies. Circle No. 277 on Reader Service Card.

Conveyor System Tows Carts on which Newsprint Rolls are Moved at Philadelphia *Bulletin*

A conveyor-like system which employs slowly-moving carts for moving rolls of newsprint has been installed in the plant of the Philadelphia *Bulletin*. Each of the 85 carts in the system is designed to accommodate one paper roll, either in horizontal or vertical position. The conveyor chain to which the carts are attached runs in a trough beneath the floor and pulls the carts at a speed of 1 mi. per hr. It follows a continuous 1780 ft. route as shown in the above diagram: From trackside, into and through the paper storage warehouse, into and through the reel room, and back to trackside.

Known as the Towveyor system, the installation was made by Jervis B. Webb Co., conveyor engineers. Operations start at trackside (upper right in illustration) where the 1800 lb. rolls are unloaded by a Lewis-Shepard electric clamp truck and placed on the moving Towveyor carts. The conveyor system does not stop during any of the operations.

Paper rolls are removed from the carts inside the warehouse by another electric truck and stacked for future use. Rolls needed for the presses are loaded horizontally onto the carts which move them into the reel room. First stop is at Figs. 1, 2 and 3 in the diagram where the roll is unloaded, wrapper removed, weighed and automatically loaded on the cart. The roll then travels to a position beside the press where it is manually unloaded, the empty cart returning to trackside.


Rolls of paper are rolled manually from carts and lined up ready for the presses. There are perhaps a dozen rolls per lane
Rolls are taken from cars on end via Bartel attachment on electric truck, and are loaded on carts, on end, on the fly
presses
) The air operated kickoff pushes rolls onto platform and turntable
) Wrapper is removed and rolls are weighed. The platform slopes
) An automatic loader permits rolls to go back on moving carts. There is a bumper on far side to prevent overtravel
If temperature, humidity and type of paper are just right, paper may be taken direct from cars to press. In this event, rolls are loaded in horizontal position at carside
Carts are spaced at 21 ft. centers and stay on line at all times. Track is the bolted type with removable cover plates and chain guide channels
1
2
3
arting from the delivery platform, it is possible to trace the ourse of the paper on which the *Bulletin* is printed from its rrival at the plant to delivery of the finished newspaper to the rts for distribution. Upper right diagram shows the 14-car ding on which the rolls of paper arrive, the endless chain owveyer system on which the rolls are taken to the cavernous aper storage areas and later to reel room beneath presses
Rolls are stored three high in warehouse via clamp trucks which unload the moving cart on the fly. When taken from storage, rolls are loaded in horizontal position
The diagram directly above shows at right the basement of the office building, which is used principally for paper storage

Run-of-Paper **Color** *For Daily Newspapers*

This is the concluding chapter of the ROP Color Series for Newspapers. The author discusses future photography, engraving, color scanners, stereotyping, pressroom, direct printing and offset

By VERNON R. SPITALERI*

**Executive Vice President, Sta-Hi Corporation, Whittier, Calif.*

Part IX—Future of Newspaper Color

Since newspaper color in a sense represents the future now, it seems appropriate to wind up this series with a discussion of what the future may hold for newspaper color. There is a well-worn saying in science and engineering circles to the effect that "What man can conceive, he can eventually create." Innumerable instances have been recorded in the world's history that lend considerable authority to this quotation. Only the time factor between present conception and future accomplishment is unknown and open to speculation. With this assumption in mind, I gingerly don the dubious robe of "prophet" and will speculate as to the future of newspaper color.

The present status of newspaper color throughout the industry has been made possible only by the many developments in equipment, materials, and techniques that have come along rapidly in recent years. The color snowball is really getting up speed and promises a bright, exciting future.

Before launching this prophecy, however, I would like to explain the reference to *newspaper color*. It has been debated often in recent years that the term *ROP color* is confusing and misleading and open to widely varying interpretations. The term *newspaper color* has been suggested in several circles of late as being a simple straightforward term describing quite accurately what most of us refer to when we speak of running one or more colors in the daily newspaper in addition to black, regardless of the many methods used to accomplish the final result—namely, color on ordinary newsprint and carried as a part of the regular newspaper. Color comics and roto sections do not fall in this category.

Photo and Engraving

In photographic color film the future certainly holds greater speed and color fidelity coupled with simpler, faster processing techniques. Some improvement in camera equipment and lighting can also be anticipated. In fact, one important improvement is presently being field tested. This improvement consists of the completely new lenses designed by Dr. Thomas Curtis to greatly improve the flexibility of his one-shot cameras. The new lenses permit working over considerably wider angles coupled with improved depth of focus, which, in addition to recent film speed developments, make the one-shot camera virtually as flexible as a conventional press camera.

The future should certainly hold promise for a much greater number of artists, photographers, and editorial people with sound newspaper color know-how which should result in a general improvement in copy conception so all-important to the final result.

Considerable basic scientific work is going forward in connection with color separation methods as well as a great amount of practical field work and we can certainly look forward to improved quality in separations and color correction in less time.

Although the present Curtis color analyst serves as an effective tool, there is still room for improvement toward the ultimate objective of perfect critical analysis of color prior to making finished engraver's screened negatives. Some work is presently under way directed toward development of improved analyzing equipment and procedures.

The future should find many more newspaper engravers achieving the goal of producing significantly better quality color plates with complete elimination of handwork on the etched plates. This development in turn opens the way to printing process color from original plates even by newspapers requiring multiple sets of plates.

Electronic Scanners

Fully automatic color separation and correction via electronics has been a dream of scientists and engravers for many years. Many millions have been spent in recent years by companies world wide to bring this dream to fruition. The basic objective has been to duplicate the equivalent of photographic color correction masking by electronic computation. Eastman Kodak Co. has worked on this approach for over 20 years and the well-known Time-Life scanner developed at the Springdale laboratories is one of the notable results of Eastman's initial efforts.

During this same 20 year period, Interchemical Corporation has approached the problem of automatic color correction by the solution of the Neugebauer equations via electronic computation. The relationship between color as perceived by the eye in the original and the screen dot characteristics of three and four-color inks are expressed by the Neugebauer equations mathematically. R. R. Donnelly Co. of Chicago has taken over the further development of the RCA machine which was a direct outgrowth of

Electronic Color Scanners

	Preliminary Separations Required	Transparency Original Copy	Opaque Original Copy	Letterpress Plate Produced	Continuous Tone Negative Produced	Screened Negative Produced	Change Of Size	Separations Produced Simultaneously
1. Time-Life		X			X			X
2. RCA	X				X			
3. NEA-Acme		X	X		X (a)			X
4. Fairchild								
a. Plate		X	X	X			X	
b. Film		X	X			X (a)	X	
5. R. Hell								
a. Plate		X	X	X				
b. Film	X				X			X
6. Crosfield	X	X			X (a)			
7. Hunter-Penrose			X		X		X	
8. Miehle		X	X		X			X
9. Belin		X	X		X (a)	X	X (a)	

(a) - either positive or negative

Fig. 40.

the Interchemical Corporation's efforts.

These two basic approaches cover virtually all the varied attempts to date toward electronic color correction. There are at least 10 major companies throughout the world presently working on electronic color correction. (The various activities and the characteristics of their machines are carried in the chart in Fig. 40.) The two most widely known machines are the Time-Life and RCA) (Donnelly) scanners with the Time-Life scanner being the only one presently used in commercial production to any degree.

NEA-Acme's color scanner produces both three and four color and is being used within that company's own operation.

The German (Hell) machine is presently being field tested. This produces color corrected plates directly from original copy. Fairchild Graphic Equipment; J. F. Crosfield, Ltd. (England); Hunter-Penrose, Ltd. (England); Belin Co. (France) and Miehle (U.S.) are some of the other major organizations working in this field.

The Time-Life, NEA-Acme, and Crosfield scanners as well as the Hunter-Penrose Autoscan and Belin machines all scan original color transparencies and produce color corrected continuous tone negatives.

The RCA scanner, an alternate Crosfield scanner, and the Hell continuous tone color correction device all work from a set of uncorrected black-and-white separations previously made through standard color separation filters.

The Fairchild scanning equipment works from original color copy and produces a screened set of corrected color plates. Another version of the Fairchild system produces screened color corrected separation negatives or positives.

Although a number of problems remain to be solved before electronic scanners can be widely used commercially, it would be reasonable to assume that this type of equipment will play an important role in the future of process color.

Stereotype

Improved color mat registering equipment should find wide acceptance in the future and should go a long way toward guaranteeing accurate register of the finished stereotype plates. Improved casting and shaving equipment and procedures would permit production of dimensionally accurate stereotype plates at reasonable casting speeds.

If stereotyping is to maintain its relatively important position in the future of newspaper color, equipment and techniques must be developed and used to produce newspaper color press plates of a quality approaching the present quality of magazine stereotype plates. Considerable research and development work is presently being carried out which should make this goal attainable.

Routing of color plates is a costly, time-consuming step in processing color plates through the stereotype department but the not-too-distant future should find multiple routing commonplace, thereby alleviating this problem.

Pressroom

The pressroom operation is literally pregnant with possibilities for significant improvements in producing top-quality color at even greater speeds than now being attained. Assuming an improved plate from the standpoint of dimensional accuracy, stability, and fidelity to the original (whether they be stereotypes, plastics, original magnesium plates, etc.) automatic controls at many points can play an important role toward achieving consistent quality.

For example, ink densities once properly set for a specific job, can be read automatically while being transferred at high speed and the information can actuate electronic color control settings which would be virtually foolproof throughout the run. Proper roller setting (particularly form rollers) is vitally important to the final printed result and a fully automatic roller set, guaranteeing proper ink transfer throughout the run, should certainly be a reality in the future.

Central control of all important press functions coupled with statistical quality control should also go a long way toward improving the quality level, consistency, and cost picture in the pressroom. Many of the components needed to do this job and much of the technique is already available but more work remains to be done to make

this concept of pressroom operation a reality.

Materials

Inks—Many years of effort on the part of newspaper and advertising agency personnel culminated in the establishment of newspaper color ink standards announced in 1956. Although recent tests indicate that many major suppliers have not yet attained the quality control levels necessary to make this standard a working reality, we can certainly look toward improvement in ink standardization in the future. Some experimentation with various suppliers' inks during the past two years has demonstrated rather conclusively that this goal is attainable. Certainly any significant deviations from the established standards should not exist for too long in the future and, in fact, should not be tolerated.

Newsprint—Although continued efforts should be and must be made to improve newsprint quality, the economics of manufacturing cost as well as publishing speed requirements rule out any possibility for really significant quality improvement from this source in the foreseeable future. (See Part VII, Sec. 3, Pressroom, July 1957 *Printing Equipment Engineer* for more discussion on newsprint quality factors.) However, a recent *ANPA Research Bulletin* reports that laboratory tests definitely prove white newsprint would improve ROP color reproduction, and it is encouraging that the Institute of Paper Chemistry, Appleton, Wis., among others, plans additional work on this problem.

Direct Printing

Considerable interest has been shown in recent years in the possibilities of printing directly from original plates on newspaper presses. Although this has been done in several plants, much work yet remains to make so-called direct printing a practical reality on a production basis. Nevertheless, several serious research programs, including one by Knight Newspapers, have charted the course toward the goal of printing direct from original magnesium process color plates of 85 to 100 line screen. One of the toughest initial hurdles, namely, elimination of handwork on finished engraved plates, has been overcome and this development coupled with successful use of high speed etching procedures for process color plates has now made possible economical production of original process color plates in multiple sets at costs comparable or less than nickeled stereotype plates ready for the press.

Original plates properly mounted should be dimensionally accurate within far closer tolerances than present stereotype plates and permit printing from harder press packing. A plate of this kind would also permit improved impression and roller settings which, in turn, should also register significant quality improvements.

A number of other research programs hold promise for the possibility of producing the equivalent of lightweight original plates using various plastic materials such as Time-Life's Nylon plate. Here again, the plates would be dimensionally accurate within tolerances presently unheard of. With duplicating losses eliminated, finer screens can be considered, and again more accurate and firmer press packing coupled with improved impression and roller settings.

It is not inconceivable that the future will see national advertisers supplying newspapers with the equivalent of original plates at costs comparable to present day costs for supplying baked mats. When that time comes serious consideration can then be given to redesigning press cylinders to obviate the need for mounting thin gauge original plates on dummy bases.

Offset Lithography

Both conventional and dry offset have been studied for some years for possible application to widespread newspaper use. Some 20 years ago the Trenton (N.J.) *Times* started serious experimental work on a full size newspaper offset press and this press is presently doing magazine publication work. The Melbourne (Australia) *Argus* has produced fine quality offset work on newsprint for many years and, since the installation of its newest Hoe-Crabtree offset units inline with the black-and-white units, has achieved unusual quality levels of full color work in the newspaper. The ANPA carried a detailed account of the Melbourne *Argus*' offset work in Mechanical Bulletin 483, May 22, 1953. (Unfortunately, the *Argus* suspended publication recently which brought this work to a halt.)

The ANPA laboratories have been experimenting with dry offset for some years and John Park of the Chicago *Tribune* has been actively engaged in research work on dry offset for better than five years.

Within the past year the St. Petersburgh (Fla.) *Times* has experimented with feeding pre-printed offset webs into the regular black-and-white production with varying degrees of success.

I would hesitate to predict at this point which of the various approaches described above will achieve final success. There is certainly much work going forward toward perfecting each of the processes involved and each step taken successfully serves merely to add impetus to continued work.

In discussing the future, it is easy to depart from reality. I am firmly convinced that under no circumstance will we see any *revolutionary* changes overnight. The inherent nature of our industry rules out such a possibility and virtually dictates *evolutionary* changes and these are inevitable at an ever increasing pace.

The following is quoted from a book published in 1900 by R. Hoe & Co.: "A new press has been invented which will produce daily newspapers at a production speed heretofore unheard of, together with three added printings over the outside pages. Within the next decade we should see all daily newspapers printed in color." Consideration of the date of this quote should serve to sober the wild speculator.

General Conclusions

A substantial increase in the volume of editorial and advertising full and spot color is virtually assured for the future. At the first newspaper color conference held in Chicago last fall, Walter Kurz of the Chicago *Tribune*, reported that in the first eight months of 1956 the *Tribune* carried 19.2% of its general advertising in ROP color, not including comics and roto. This amounted to 23% of the general advertising revenue and he further estimated the *Tribune* would bill more than $3 million dollars in ROP color advertising in 1956. The spokesmen of both the Chicago *Tribune* and the Milwaukee *Journal* estimated that within five years they expected to carry significant percentages of local as well as their general advertising in color.

The future should certainly see spot news in full color on page 1 as commonplace. All the wire and radio photo services should be making heavy use of color in the future.

Full color production in newspapers is reaching new levels of standardization and excellence each year. Through continued exchange of ideas and close cooperation among advertising agencies and newspaper color production teams, future improvements and refinements can be expected.

The vital importance of using the best equipment available in each instance cannot be emphasized too strongly. To scrimp on needed equipment, and particularly top-quality precision equipment, can only be considerd foolhardy and decidedly false economy.

Regardless of the future, newspaper color is here now. For those who recogni e this and accept color as inevitable in their operations it is hoped this series has served some useful purpose.

(ROP Series Concluded)

How To Frustrate Hazels With a Generating Plant

By HERBERT G. TAYLOR*

**Production Mgr., Bethlehem (Pa.) Globe-Times. Address delivered before Pennsylvania Newspaper Publishers Assoc. convention, Bellevue-Stratford Hotel, Philadelphia, Oct. 1956.*

After our management decided to protect its plant against possible power failure, the problem was passed on to me to make a study of our power requirements and the various types of motor generators on the market. Some generators are driven with Diesel engine using No. 2 furnace oil for fuel. Others are run on gasoline or they could be equipped with Zero pressure regulators for operation on butane, propane, or natural gas. In our case, we chose a gasoline motor for it suited our needs best. It is true we could have operated cheaper per hour cost with Diesel oil. But we made this installation for power failure and had no thought of competing with the power company.

We operate a five unit Duplex press. We put a recording amperemeter on the lines to this motor to find out what our demand would be for three, four and five unit runs. This load was found to be from 200 to 235 amps. Then a study was made of each department as to loads for light and power. I should add that we also have a radio station and a job shop on the newspaper power line.

One check was made at 9 a.m. and the load was 380 amps. The next check was made at 10 a.m. and the load was 500 amps. The increase of 90 amps. from 9 a.m. was caused by our pig caster. Then a final check was made at 2 p.m. with the press running on a three unit run at which time the draw was 480 amps. Our stereo pot is heated electrically but it cuts out automatically when the press is in operation.

Having made the study, a request was sent out asking for prices on 300, 375 and 450 amp. motor generators. The 300 amp. generator would permit us to run the press, but would leave only about 60 or 70 amps. for lights and other loads. If we had chosen a plant of this size, we would have had to set up an operation to run only the composing room until all the pages were down, cut off all power to this department, then do the same thing in the stereo department, then when plated up, cut off everything else and use the total output for the press.

If you expect to buy a power plant, check prices on several sizes. Our comparison turned out to be a big factor in helping decide because the difference in price between 300 to 375 amp. equipment was around $3 thousand while the price between 375 and 450 amp. outfit was only $800.

You can readily see that the 300 amp. plant would permit us to get out a paper. But it would call for a lot of juggling of switches and one department waiting on another. The 375 amp. plant would permit us to run about 80% normal. The small spread of cost between the 375 and the 450 amp. equipment prompted us to choose the 450 amp. plant. This permits us to operate between 90% and 100% normal if we cut out such things as the pig caster that draws 90 amps. and a few lights.

The location within your plant of a power unit is very important and careful consideration should be given the following:

First of all, the unit should be installed in a clean, dry room where the temperature is relatively even all year round. The room should be well ventilated to permit free air flow to keep the unit cool. In our case, the unit is water cooled and the radiator fan exhausts air through a duct to the outside.

The location also must be considered for convenience to main switches and power feed.

Last but not least, you should secure the necessary permits and OKs from state, city fire marshal, insurance companies and Dept. of Labor and Industry. All electrical work must conform with existing electrical codes in your locality.

A 1000 gal. gasoline supply tank buried outside our building required specific state approval.

There are many ways and methods for starting power plants and the changeover of the power lines. You can have a pushbutton control located on the unit with cranking current supplied from storage batteries. The batteries are maintained at full efficiency through a charger hooked into the normal 110 v. line. A remote starting plant may be started or stopped by pushbuttons at the generator or from any one of any number of remote locations within the plant. Power feed can be cut over by a hand operated switch. If you desire, you can have fully automatic starting and then at the instant of commercial power failure, the line transfer control automatically transfers the load from the normal service to the standby electric plant, furnishing an auxiliary source of power until such time as the normal service is resumed when the load is transferred back to the commercial service. At this time the plant stops.

The automatic feature is advisable only if the generator is of ample capacity for full operation at any hour interruptions might occur. Our's is a six day paper. We voted against a fully automatic operation. There are times when we do not have work going on and would not desire to have the plant running without qualified attendants. Our plant is set up to

Honolulu Litho Installs Harris—New four color Harris 43 in. by 59 in. press was recently installed at Honolulu Lithograph Co., Hawaii. The press with stream feed and double delivery prints four color labels for the Hawaiian pineapple industry. Pictured, left to right, are: Olen Gothan, assistant superintendent and P. L. McIlree, president and general manager of Honolulu Litho; Bayard Duecher, Schmidt Lithograph Co., San Francisco, Calif.; Don Brosseau, vice president, Honolulu Litho; Roy Tyler, and Walter Maker.

Mechanical Committee Appointments

President William Dwight has announced appointment of the American Newspaper Publishers Assoc. Mechanical Committee members as follows:

Chairman—J. Harold Mintun, production manager, Pittsburgh (Pa.) *Press.*

Vice Chairman — George F. Marshall, production manager, Portland (Me.) *Press Herald* and *Express.*

Randall Barton, production manager, Phoenix (Ariz.) *Republic* and *Gazette.*

Wilfred R. Coddington, mechanical superintendent, Chicago (Ill.) *News.*

James S. Copley, publisher, San Diego (Calif.) *Union-Tribune.*

Henry Garland, mechanical superintendent, Pittsburgh (Pa.) *Post-Gazette.*

W. E. Gibbons, production manager, Portland (Ore.) *Oregon Journal.*

Cecil B. Kelley, publisher, Panama City (Fla.) *News-Herald.*

Robert C. Nelson, mechanical superintendent, Detroit (Mich.) *News.*

Harry Sloan, production manager, New York (N.Y.) *Mirror.*

W. Watson Southam, vice president, The Southam Newspapers, Toronto, Canada.

James L. Stott, business manager, Richmond (Va.) *Times-Dispatch* and *News-Leader.*

Donald V. Weber, production co-ordinator, Houston (Tex.) *Chronicle.*

J. H. Zerbey, III, general manager, Pottsville (Pa.) *Republican.*

be remotely started by pushbutton and a manual three pole double throw switch used as a change over for power lines.

Our electric plant was manufactured by United States Motors. It is driven by a 6 cylinder, 280 h.p. Waukesha gasoline engine. Fuel consumption of this engine at full load is approx. 30 gal. per hr. The generator output is 150 k.w. or 450 amps. with 4 wires, 60 cy., that gives us 220 v., 3 ph. for power and 110 v. for lights. The unit specifications provide for continuous 450 amp. service. Just a word of warning. Be sure the output ratings are for continuous service and not for a limited full output for 5 or 6 hrs. Also, check with your power company as to the type and voltage it is supplying you. Do not be talked into accepting 208-110 v. when your plant may require 220-110 v. You may be told this will make no difference, but you will experience trouble with old motors and heating units that were designed for 220 v.

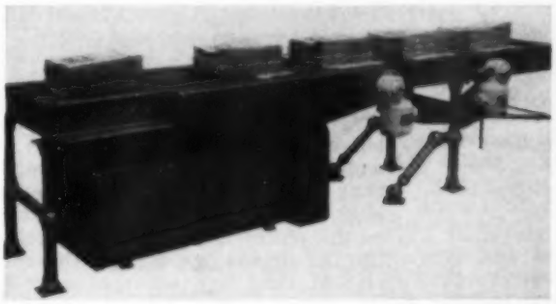
Having emergency equipment is one thing and having it ready to go any time is something else. With this in mind, we have set up a maintenance check and run this unit idle for 30 min. each week and once a month for 30 min. with a load on the generator. This unit is equipped with an elapsed time meter that shows actual running time and a log is kept.

Standard Register Will Build

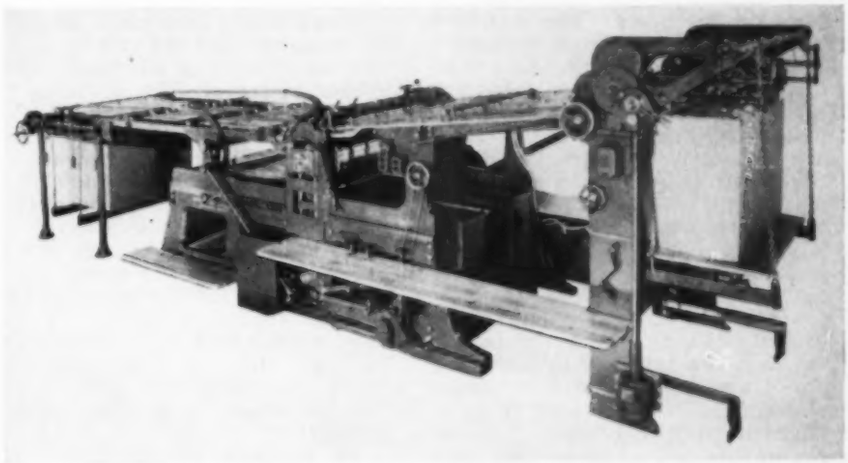
The Standard Register Co., Dayton, O., has acquired an 18 acre site near Concord, Calif. on which it will build a new manufacturing structure estimated to cost in excess of $1 million, according to M. A. Spayd, president. The projected plant will be modern, one floor plan, designed specifically for the manufacture of all types of business forms. No beginning construction date has been set.

Standard is currently building a plant in Fayetteville, Ark. and is in the process of adding 64,000 sq. ft. of floor space to its York, Pa. forms printing plant. Recent occupation of a new engineering building gives the concern five plants in Dayton.

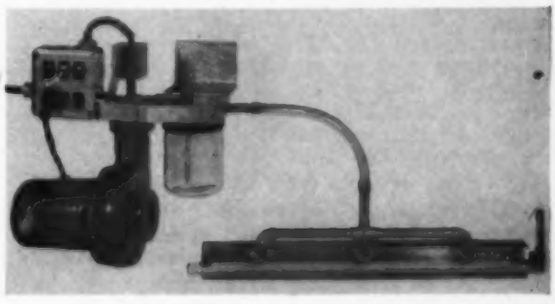
The Pacific Div. is headed by Barrett B. Klopfer, vice-president, with Mark Smith, sales manager.



Automatic Bottom Wrapper Feeder—John T. Hayford, president, Wiretyer Corporation has announced the ABW Feeder said to provide a completely automatic method of locating a protective wrapper underneath a stack of newspapers. In the machine is combined a conveyor section, a wrapper storage hopper and a wrapper feeding device. It is equipped to handle a conveyor speed up to 60 ft. per min. and under wrap an end-to-end stream of bundles. The 41 in. hopper capacity provides storage for 1600 wrapper sections having eight sheets per section. Circle No. 262 on Reader Service Card.



Cutter-Creaser Distributor—Tirfing Printing Machinery, Inc. has been named U. S. distributor of the Swedish-made Viking cutter and creaser (shown above). The machine will accommodate a maximum sheet size of 35 in. by 45 in. and stock up to 0.040 in. thickness. Rated speed is 3000 sheets per hour. Other features include: Stream feeder, extension pile delivery with continuous unloading, reloading device with power lift, back lash free gears, and a reversible steel cutting jacket. Circle No. 276 on Reader Service Card.



Atom Jet Sprayer—An offset sprayer designed for small presses can be used to bond dry powder to press sheets at maximum speeds. The Atom Jet Sprayer, made by Oxy-Dry Sprayer Corp., is operated to coat sheets and remove static electricity at the same time. Circle No. 263 on Reader Service Card.

PROPERTIES AND PROCESSING OF

Presensitized Offset Printing Plates

Part IV—Questions About Plates Answered

By AXEL LUNDBYE*

**Consultant, Printing Engineering Div., The Todd Company, Inc., Rochester, N.Y.*

In Part III were asked and answered a number of questions regarding the properties of presensitized offset printing plates together with manipulating procedures and handling on the press. In this Part IV additional questions are answered.

7. Mounting the presensitized plate on the press. The standard procedure for any good pressman for any type of plate holds true for presensitized plates. Inspect the plate, making sure that the plate is not damaged in any way, *i.e.*, it is free from nicks, rough edges and kinks. Kinks put in the plate after exposure on the very thin presensitized plates will usually iron out when put on the press. On the other hand, kinks put in the plate before exposure can give lots of trouble, due to improper exposure. Such a plate will not draw up properly in the vacuum frame. The heavier gauge plates, should kinks occur in them, might be difficult to iron out when put on the press. Remember that most presensitized plates are coated on both sides and, if we intend to use both sides, great care should be exercised in handling this type of plates.

A presensitized plate should be packed to bearer height of the plate cylinder, making sure the packing is in good condition and clean. When using the very thin presensitized plates, it might be necessary to insert paper strips fastened with pressure sensitive tape between the clamps and the plate so that we will be assured no slippage will take place when tightening the plate on the press.

8. Form roller adjustment, disregarding what type of plates are used, should be set with even pressure across the whole face. Usually for albumin plates, when dropping the rollers the ink should leave a line between ⅛ to 3/16 in. wide of even thickness. Remember that the form roller should be set slightly heavier to the drum than to the plate. This will assure that the ink drums are driving the roller. If they are set too loose to the drums, then chances are that the plate cylinder is driving the roller. That is wrong. In that case, the rollers will skid every time the plate gap in the plate cylinder passes the form roller or at the time the form roller contacts the lead edge of the plate cylinder. In whatever case the skid happens, the final result is slippage. That means roller streaks or scum or both, and the plate life will be shortened considerably.

9. When setting ink rollers for presensitized plates, the ink lines left on the plate when dropping the ink rollers should never be more than ⅛ in. wide, even across the whole face of the roller and it is possible to cut the width of this line to approx. 1/16 in. It has been proved that the less pressure between the ink roller and the plate, the better the printing result, especially with presensitized plates.

10. Running adjustments: We have already discussed water, ink and setting of fountain, and ink rollers. Scumming is a press problem. As a matter of fact, scumming as we know it on albumin plates, does not occur on presensitized plates. Presensitized plates are not subject to dark reaction nor continued reaction, and changes in temperature and humidity during exposure has little or no effect on them nor is there any change of residual coating left in the non-printing area after desensitization the proper procedure is followed. Should what appears to be scumming, it is really toning, in most cases, that would show up during development. If toning happens at the edges of the plate the platemaker could have left the flap on the package open or it could be torn. It is possible in some cases if the proper procedure is followed. ing area to hone this toning away with a clean wet eraser. It is also possible that during development the areas in which toning takes place has been rubbed too vigorously during development of the plate. Was the plate rinsed thoroughly? It could happen that some loose developer might stick to the non-printing areas if the plate is not thoroughly rinsed, especially if the plate has been finished some time before going to press. In most cases this dried developer can be easily washed off the plate with concentrated fountain solution.

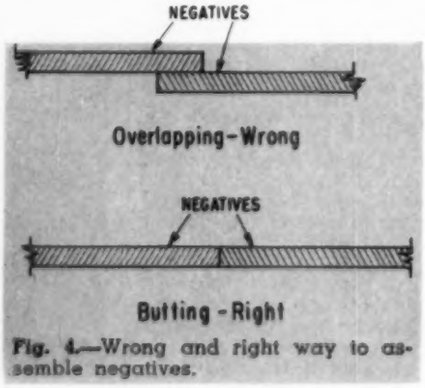


Fig. 4.—Wrong and right way to assemble negatives.

It is also possible that the plate was not properly desensitized, both in the image and the non-printing areas, or it could be possible that the plate is light struck. To avoid this, follow the manufacturer's instructions for processing the plates and be sure that the unexposed plates do not become light struck.

11. What kind of negatives should be used for exposing presensitized plates? The better the negative, the better the plate. The negative should have sharp, clean dots with little or no fringes around the edges. It should be clean, free from dust and dirt, especially on the emulsion side, because particles on this side could be the cause of poor contact when

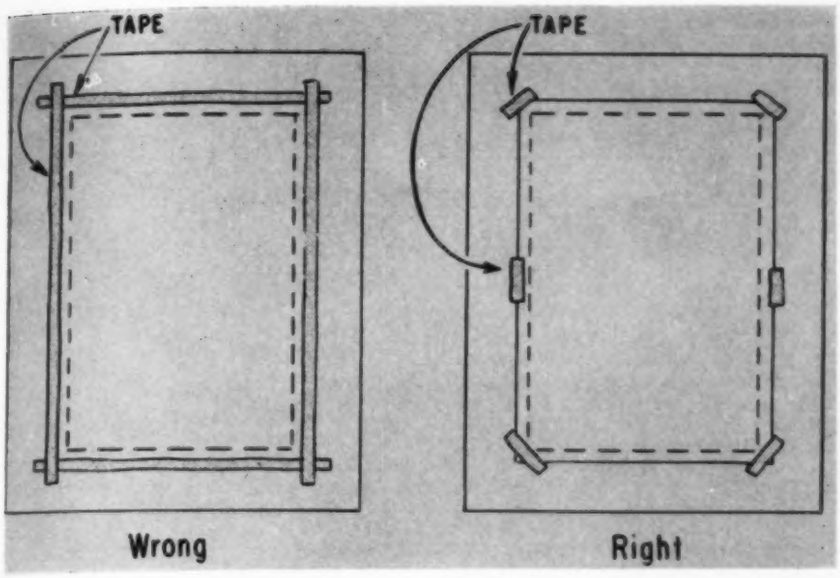


Fig. 5.—Stripping the flat. Here are some points to remember when stripping for pre-sensitized offset plates.

1. Wherever possible, use opaque instead of masking paper.
2. Masking paper should never be more than 0.004 in. thick. It is suggested that red masking paper be used because some of the orange and yellow papers transsmit as much as 5% of the ultraviolet light.
3. Use small pieces of masking tape —never more than ½ in. long. (See *right* stripping above.)
4. Keep tape more than 3/16 in. away from copy.
5. Opaque all pinholes on the opposite side from emulsion.
6. The tape should never be more than 0.002 in. thick; also keep the opaque as thin as possible.
7. Always use negatives of the same thickness.
8. Never overlap edges of negatives if more than one is stripped into the assembly.
9. Leave more than 5/16 in. of film beyond work area when trimming, to be sure that the adjoining negative will not overlap.

printing the plate. We know that static electricity in the film attracts dust. Brush the emulsion side of the negative with a camel's hair brush, or a piece of clean cheesecloth. The best type of brush to use would be the static type. There are several on the market.

Be sure there is no opaque on the emulsion side of the negative. If the photographer has placed opaque on the emulsion side of the negative, have him remove it and repaint it on the opposite side. When removing the adhesive tape, be sure that none of the adhesive adheres to the negative. The adhesive in itself can cause poor contact, but worse yet, dust and dirt adhere to it and no brush used on a negative will remove that dust and dirt. Remove the adhesive by a good solvent.

Sometimes the platemaker gets an old negative with yellow streaks or stains. Such a negative should not be used to make a presensitized plate. However, in an emergency, if the stains are not too dark, increase the exposure time and be sure you have the Sensitivity Guide on the plate also so that the final result will show up Step 8 clearly on the guide.

Halation can only be caused by one thing, poor contact between the negative and plate and poor contact is caused by one of three things: Dust or dirt, trapped air between plate and negative, stripping or marking too close to the copy. (Fig. 6). It is much more important to have perfect contact between plate and negative with presensitized plates than when exposing a mechanically grained plate. Anytime light beams are able to undercut the copy in the negative, due to inadequate contact, enlargement is the result.

Let us remember that the dots on a mechanically grained plate are smaller than on a presensitized plate due to the fact that the grain in the plate breaks them up; therefore, poor contact between the negative and a mechanically grained plate, due to dirt, dust or any foreign matter, tends to be hidden by the imperfection and irregularities of the grained surface.

With the presensitized plate with its much smoother surface, it is another story. What the light sees is reproduced on the smooth surface of the plate; therefore, better contact is needed and when that is obtained, the result will be excellent.

There are no substitutes for cleanliness to help prevent halations. Keep your working area clean. Then, if we have good contact in the printing frame, halations will be a saga.

12. Can solid areas be touched up? Yes, there are several methods that can be used. An air eraser is extremely effective for touching up broken solid areas because we can control the pin point opening of the abrasive jet. When an area has been gone over with the air eraser, it takes on a grained appearance, just like a sand blasted surface, and this area will very readily accept ink. Another way of roughening the plate is to use a very fine sand paper. Sand in several directions. The area can be controlled by sanding through a mask. Whatever process is used for touching up a presensitized plate, press ink must be rubbed into the roughened area, but the plate must be dry when the ink is rubbed into these areas for best results.

It has already been stated that the press life of a presensitized plate is approx. 40 to 50 thousand impressions but the writer has run presensitized plates above 300 thousand. To get such result, it is necessary to re-process the plates during the runs. That can be done while the plate is on the press, but it must be done before any injury takes place in the image areas. It is a good thing to remember that. We don't have "walkoffs" on a presensitized plate. It is a "gallopoff." Sometimes this is due to underexposure, but if we use the sensitivity guide, that would not be the case.

(*Continued on Page* 78)

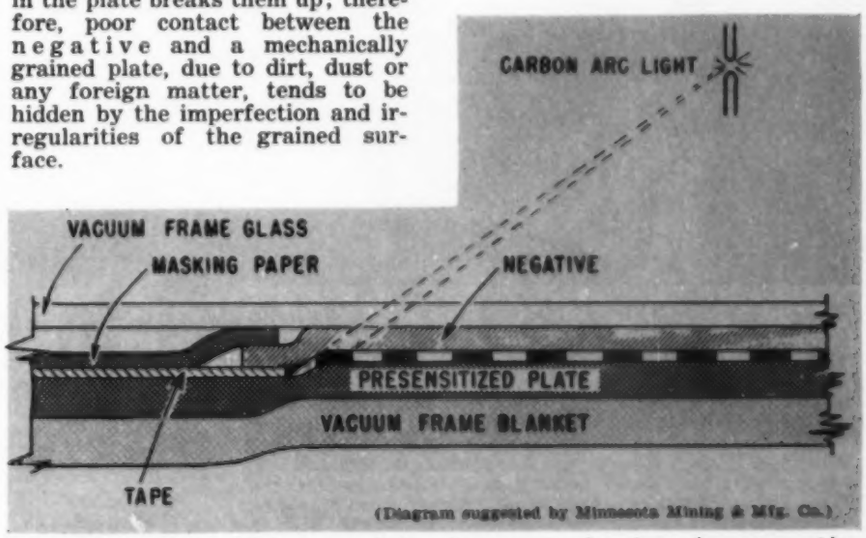


Fig. 6.—Halation. It will be noticed that the tape is placed on the wrong side of the negative (emulsion side) and too close to the copy. Without doubt, halation will result. Masking paper should never exceed 0.004 in. thickness.

Photoengravers' Program Full of Technical Talks

Perhaps the most interesting and informative convention from a technical standpoint ever held by the American Photoengravers Assoc. occurs at Hotel Bellevue-Stratford, Philadelphia, Oct. 14-16 inclusive.

One of the principal speakers will be T. A. Dadisman, vice president, Printing Developments, Inc. Dadisman will discuss *Technical and Economic Status of the Time-Life Color Scanner.* Another well known executive will discuss a rather interesting subject, *Engineering Gets "Etchucated."* He is R. H. Downie, supervisor, Printing Development Sec., Marathon Corporation, Menasha, Wis. Executive Secy. Frank J. Schreiber, APEA, will present a progress report on *Research for the Letterpress Industry.* Schreiber's report on this recently inaugurated proposal should be encouraging to the giant letterpress industry.

Cost accounting and selling for profit will be handled by several speakers.

There will be two speakers on latest determinations regarding lighting. The first is Warren B. Reese, vice president, Macbeth Daylighting Corp. His subject is *Standardized Overhead Lighting for Graphic Arts Reflection-type Art Copy and Proofs.* Phil E. Tobias, director, research and engineering, Edward Stern & Co., Philadelphia, will discuss *Recommended Lighting Practice for Color Appraisal of Reflection Type Materials.*

A panel session entitled *Quality Control—Fact Not Fiction,* will be led by Leon J. Marks, Asst. to Supt., Quality Control, Curtis Publishing Co. At this session, ramifications of practical quality control will be discussed.

A report on a fascinating subject: *Progress on Powderless Etching of Copper,* will be given by J. W. Bradley, technical research director, Photoengravers Research, Inc., Atlanta, Ga.

A panel session on Powderless Etching Processes will be moderated by Victor Schwarze, vice president of The Krus Co., Milwaukee, Wis.

Other Technical Talks

Other subjects to be discussed by specialized speakers are: *Advertising for Photoengravers,* by W. A. Reedy, Eastman Kodak Co.; *Masking for Reflection Copy,* by Donald R. Spear, Eastman Kodak Co.; *The New Lithoflo Processor,* by Glen C. Bull, The Haloid Co.; *Photoengravers' Responsibility to Printers,* by Paul W. McKinney, Fawcett-Dearing Printing Co., Louisville, Ky.

Wilfrid T. Connell, president, Intl. Photoengravers' Union of N.A. will discuss *What Price the Union?* Fred W. Wentzel, technical director, IPE Union of NA speaks on *Progress in Photoengraving and the Craftsman. Illumination of Copy Boards and Printing Frames* is the subject assigned to John Winzeler, physicist, The Strong Electric Corp. Ira B. Current, manager, Standards Dept., Ansco, will present *Establishing Specifications for Sensitized Products.* Harvey T. Holsapple, vice president, Kemart Corporation, who has appeared at previous conventions will speak on *Kemart - Pawo Gray Contact Screens.*

Fine New Building for Didde-Glaser, Inc.

Formal opening of the new plant for Didde-Glaser Inc. in Emporia, Kan., was held recently in conjunction with the Kansas industrial expansion program.

Carl Didde, president of the company, stated: "Three years ago we were making the units in a small building with three or four employees. Today in a modern factory we are employing more than 57 highly skilled persons to keep up with orders for our collators. Business volume has jumped to more than $1.5 million a year."

Didde-Glaser has established an experimental laboratory section for research, development and improvement of printing equipment.

More than 4000 persons visited the plant during its formal opening.

President Didde also announced appointment of William E. Bauman as advertising manager of the firm. Bauman was formerly associated with Financial Publications, Inc., and Folger Coffee Co. in editorial and advertising capacities. He majored in Business Administration at the University of Kansas City.

ITCA Convention Committee is Busy

Members of International Typographic Composition Assoc. begin advance registration September 18 for their 38th annual convention at Hotel President, Kansas City, Mo. Three days of business meetings and entertainment events close with the annual banquet-entertainment September 21. Programs of business sessions include the subjects of time record-keeping, cost determination, the status of photocomposition, and market developments.

ITCA convention committee members, seated, left to right, are: Ralph Lane, Speed-E Cross Rule Co., finance chairman; Burt Burnham, Stanley Type, Inc., general chairman; Dan M. Carr, Acme Typesetting Co., president, Kansas City association; W. E. Switzer, ITCA executive secretary; Oliver Wroughton, secretary-treasurer, Kansas City association, and Dale Robinson, past president, Kansas City association.

Standing, left to right: Gene Cohen, typographer; Burdette Yeo, executive secretary, Kansas City Graphic Arts Assoc.; Fred Hacker, Western Typesetting Co.; Charles H. Greenlee, Miller-Greenlee Typesetting Co.; Robert Gadd, Western Typesetting Co.; John Marty, Perrin-Marty Typographers; Harry Polen, Polen's Typography; Frank Maschler, M&M Typesetting Co.

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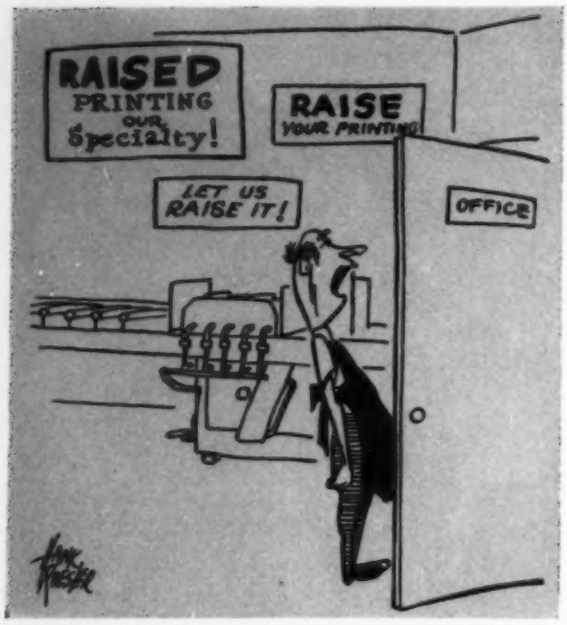

"How about my raise?"

Annual Report Published

The Champion Paper and Fibre Co. recently released its Annual Report to shareholders for the fiscal year ended Mar. 31, 1957. According to the report, Champion sales were up 9.2% over 1956, to a total of $168,357,000. The year's operations produced earnings of $3.14 per common share and dividends of $1.20 per share were paid, an increase of 20c a share based on the number of shares outstanding at Mar. 31, 1957.

The five color cover for the Annual Report was printed letterpress and the body was reproduced by offset lithography in three colors. An eight page gate-fold brilliantly printed pictorial insert was produced by letterpress in four colors.

Color Code For Press Tools

Earl Bierbauer, plant superintendent, The Baring Press, Detroit, spoke briefly at the Buffalo Intl. Craftsmen's convention premakeready clinic. He said that in his plant tools are painted red for use on one press, blue for another press, etc. The color identification keeps tools confined to the proper press. He was critical of suppliers of letterpress material for not getting their material as close as possible to the specified tolerance. He was of the opinion that a premakeready system begins with the supplier.

Harris-Seybold Calendar

London and Paris at the time of the French Revolution, as described by Charles Dickens in *A Tale of Two Cities,* have been graphically brought to life by artist Everett Henry for the new Harris-Seybold Company mid-year calendar. The 1957-58 calendar, which forms the fifth of the current Map-of-a-Book series, was recently mailed to more than 20,000 Graphic Arts firms.

The calendar was produced by the Brown & Bigelow Co., St. Paul, Minn., on a two color 42 in. by 58 in. Harris offset press. Fifty percent rag content ivory stock was used for the calendar, which measures approx. 27 in. by 31 in.

Until the supply of extra calendars is exhausted, a copy of the calendar or the separate print may be obtained by writing direct to Harris-Seybold Company, 4510 East 71st St., Cleveland 5, O.

Company Incorporated

The Dan Ryan Solvent Co., a new corporation, has established offices at 732 Federal St., Chicago 5, Ill. Officers of the company are Gus Schelkun and Dan J. Ryan. Solvents and chemicals will be manufactured for letterpress, lithography, gravure and flexography. Ryan stated the new firm also will be sales agents for platemaking and pressroom supplies and equipment.

Litho Courses Offered

The Cleveland Lithographic Institute, Inc. has announced Graphic Arts courses available for the coming year. They are: lithographic layout and stripping, lithographic platemaking, color correction and dot etching, lithographic pressmanship and a survey of lithography.

The institute's officers include: Fred A. Merrick, president; Paul A. Meunier, vice president; Robert B. Calvert, treasurer; George Weber, secretary, and Russell Waddell, educational director. For particulars regarding entry dates and courses contact: E. T. Engle, recording secretary, Cleveland Lithographic Institute, Inc, 1120 Chester Ave., Cleveland 14, O.

ATF To Distribute Saws

A full line of Nelson Cost Cutter composing room saws will be distributed nationally by American Type Founders Co., Inc., according to William W. Fisher, president, ATF, and Sherman E. Pate, the Pate Company. The three models come with tables which glide on steel ball bearings and each is equipped with a 92 pica gauge bar and end gauge workholder with a capacity for sawing plates up to 21½ in. Model A bench saw is equipped with stationary saw head. Model B is a heavy duty work horse with 7 in. diam. saw blade and larger side table. Model C comes with a micro-elevating saw head which allows for undercutting and mortising as well as cutting and trimming.

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PATENTS

For The GRAPHIC ARTS

Covering patents issued June 4, 11, 18 and 25.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc. presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

MULTIPLE LINE PHOTOCOMPOSING

In apparatus for photographically copying documents having areas to be copied of variable width, this device makes it possible to use cards of variable widths as the exposure width can be varied by a signal derived from a code on the document being copied. Patent 2,794,364 by Harvey P. Hintz, James P. Hayden, Glen W. Offensend, and Robert W. Wetherald, assigned to Eastman Kodak Co.

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Feeding, Folding, Delivery:

SWITCHING MECHANISM FOR CONVEYORS

The switch mechanism is for use in diverting the flow of a lapped stream of newspapers traveling on a conveyor from a press folder to a stacker on a mailing table in case a jam should occur in the line. The flow is then handled by another conveyor and stacker. Patent 2,795,312 by Frederic E. Howdle, assigned to Cutler-Hammer, Inc.

SHEET CATCHING AND STACKING DEVICE FOR PRINTING PRESS

The device is for attachment to the framework of a press. It is adapted to co-act with a sheet supporting board so that as it is being inserted into position it is immediately operative to catch and stack sheets and there is no discontinuity of the stacking operation. Patent 2,795,420 by George F. Rooney, Jr.

COMBINATION FOLDER FOR PRINTING PRESS

The folder is adjustable so that two or three folds may be made in a sheet or signature. Certain of the folding parts are mounted on two swing frames which are forked and thus adapted to straddle fixed supports. Patent 2,797,085 by Curtis S. Crafts, assigned to Miehle-Goss-Dexter, Inc.

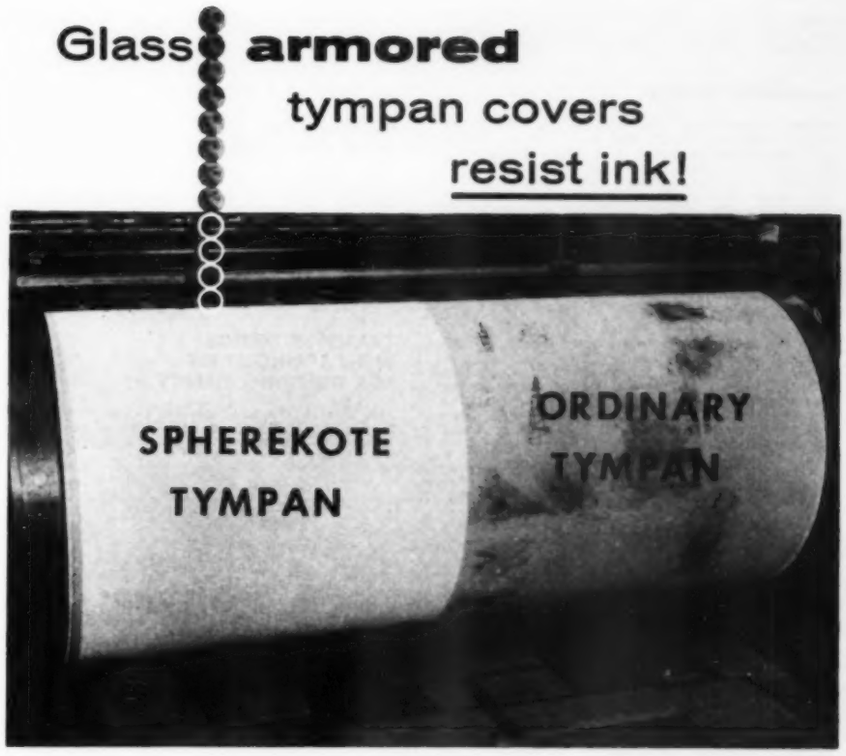
SHEET FEEDING AND REGISTERING MECHANISM

For use in multi-color printing, a reciprocating carriage upon which are mounted one or more back gauges is used to push sheets forward at the speed of the sheet handling machine for a considerable portion of the sheet travel to enable moving sheet to settle against the back gauge. Carriage is driven by a train of gears designed to eliminate lost motion. Patent 2,797,094 by Howard J. Seel, assigned to Harris Seybold Co.

STRAIGHT AND COLLECT DELIVERY MECHANISM

For use with high speed printing presses, this transfer mechanism employs a unit assembly which is more easily assembled, serviced and maintained. Timing and other adjustments may be easily and quickly made with provision for all of the pins, jaws or grippers on a par-

Glass **armored** tympan covers resist ink!



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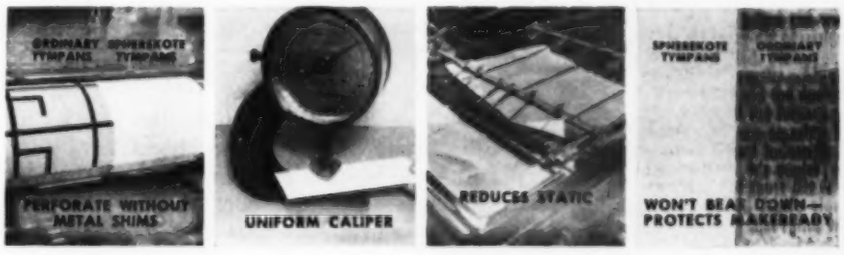

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ticular cylinder simultaneously and to exactly the same degree. Patent 2,797,084 by Vernon J. Hilgoe, assigned to Miehle-Goss-Dexter, Inc.

ALIGNING DEVICE

Folded signatures are aligned as they are rapidly delivered from the folder of a rotary, web type printing press to a chute conforming generally in cross section to the length and breadth of the signature. Each signature falls into chute without frictional contact with any other signature. Patent 2,797,098 by George R. Brodie, assigned to Fred'k H. Levey Co., Inc.

STOCK FEEDING MEANS FOR ROTARY PRINTING MACHINE

This feeder makes possible the printing of envelopes across the entire back surface. A traveling alignment device maintains contact with the sheet during its entire passage between printing and pressure cylinders, and aligning guides serve to strip the stock from the printing cylinder. Patent 2,794,390 by Jerry A. Burke, Jr.

Binding, Cutting, Perforating:

BOOK COVER APPLYING MACHINE

The machine is completely automatic, the only manual attention required being to feed the machine with books and covers. Such feeding does not interrupt the operation of the machine. The machine parts and operation have been simply designed and assembled, and the principle of gravity has been applied in every possible way. Patent 2,794,993 by Lionel J. B. R. French.

TRANSFER DEVICE WITH SPRING JAWS FOR GRIPPING SHEETS

For use in the bindery for transferring single folded or unfolded sheets from a stack to a conveyor, the movement of the suction cup is so controlled that the undersides do not rub against the surface of the suction cup and cause undue wear. Patent 2,796,256 by George L. Robertson, assigned to Robertson Brothers, Inc.

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Platemaking:

METHOD OF PREPARING LITHOGRAPHIC PRINTING PLATE

This plate has good ink receptivity and durability. It is prepared by transferring an unhardened gelatin image to a lithographic printing plate which will repel greasy printing inks when wet with water wetting the plate surface and the transferred gelatin image with a solution of tannic acid and thiourea, after which the plate is wet with water and run in a lithographic press. Patent 2,794,388 by Orson W. Lake and Charles F. Amering, assigned to Eastman Kodak Co.

ROSIN DERIVATIVES OF DIAZONAPHTHOL- AND DIAZOPHENOL-SULFONAMIDES

The compounds are good for sensitizing plates for lithography. They possess a structure of a saturated, unconjugated, non-polar character. A compound claimed is: n, n'-didehyroabietyl-N, N'-ethylenebis (6-diazo-5(6)-oxo-1-naphthalenesulfonamide). Patent 2,797,213 by Ralph G. D. Moore, assigned to General Aniline & Film Corp.

PHOTOGRAPHIC FILM CORRECTION APPARATUS

The severing and splicing of phototypographical film is automatically carried out in a predetermined sequence by this invention, which selectively transports the film between a shearing unit and a splicing unit. Patent 2,794,487 by James C. Plastaras, assigned to Mergenthaler Linotype Co.

COMPOSING BOARD

This board may be used to assemble rapidly in accurate alignment or crossed alignment a considerable number of individual elements such as molds, planographic printing plates, electrotypes, photoengravings, rubber printing plates, etc. Patent 2,796,675 by Gustave H. Schwenk and Howard G. Schwarz, assigned to The Art Electrotype Co.

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Printing Presses:

DRIVE MECHANISM FOR ROTARY WEB PRINTING MACHINERY

An impression cylinder is adjustable to cooperate with plate cylinders of different diameters. The change of a single pinion permits replacement of the plate cylinder by a plate cylinder of different diameter while automatically maintaining synchrony. Patent 2,794,359 by Angus M. Halley.

COMBINATION SPEED CONTROL AND TORQUE CONTROL DEVICE

Slippage is reduced to a minimum by the use of a torque controlled magnetic clutch or brake driven from a main drive shaft by means of a speed change device. Simultaneously the slippage is measured between the clutch members and the output of the change speed device is controlled to drive the clutch or brake by means of the measurement of slippage between clutch members. Patent 2,796,222 by Sydney Frankel, assigned to Web Controls Corp.

HIGH-SPEED CYLINDER PRINTING MACHINES WITH MOVABLE FORM BEDS

Planetary gears disposed on beds which mesh with and roll over sun gears mounted on the base frame afford a precise rolling motion of the meshing teeth during lowering as well as rising movement of the type beds. This eliminates friction and rapid wear. Patent 2,794,392 by Arthur Buttner, assigned to Schnellpressenfabrik Aktiengesellschaft Heidelberg.

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PATENT SEARCHES
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WEB TENSIONER

In high speed rotary printing presses to which paper is delivered from a roll that is out of round, this tensioner provides for supporting a portion of the web at spaced points along its length and for creating a differential pressure on opposite sides of the web intermediate the points of support. The size of the bulge thus formed controls the speed of the web. Patent 2,796,223 by Abraham L. Detweiler.

PLATE DAMPENING MEANS

Electrical force is employed to deposit vaporized moisture onto selected areas of a lithographic plate cylinder. Moisture is confined to these areas with little escape to surrounding parts. Patent 2,796,832 by Howard A. Pritchard, assigned to Harris Seybold Co.

WATER FOUNTAIN REGULATOR

A constant level of moistening fluid is maintained in the moistening tray or fountain of offset printing presses by a plunger type regulating valve. There is no tendency to airlock because separate passages are provided for air and the moistening fluid. Patent 2,796,078 by Benjamin S. Ebersole.

ADJUSTING MEANS FOR PRINTING PRESS ROLLERS

An improved manually adjustable supporting truck for a printing press roller is designed to prevent flange or tire overhang, with the result that a maximum volume of tire body is available for radial displacement and tire life is increased. Patent 2,795,188 by Amy S. Williams, assigned to Cowan Pressroom Products, Inc.

ROLLING CONTACT PLATEN PRESS

For the successful operation of a rolling contact platen press, this press uses a minimum number of additional parts over those found in a conventional platen press of the Gordon type. The operation is a swinging or floating movement and no springs are used. Patent 2,795,187 by Charles F. Root, assigned to The Chandler & Price Co.

SAFETY GUARDS FOR POWER OPERATED MACHINES

For use with lithographic offset type presses, this safety device consists of a guard which intersects the path of the operating lever to lock it in either operative or shut off position. It protects completely against accidental starting up of the machine. Patent 2,794,528 by Carl G. King, assigned to Rotaprint Limited.

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Miscellaneous:

OPERATING CONTROLS FOR PRINT-DRYING APPARATUS

For use with traveling web driers which are heated by a gas burner and air manifold arrangement, this improvement prevents danger from gas leakage. It also protects the passing web from being scorched or burned by flames from the burner. Spark production is terminated immediately upon detection of the ignited burner flame by a flame rod. Patent 2,797,074 by John H. Flynn.

BUTT-END ROLL REWINDER

Butt-end rolls remaining after a run of a flat bed newspaper press of the Goss or Duplex type may be salvaged by this rewinder. The rewinder is an attachment and its use eliminates all waste. Patent 2,794,606 by James L. Miller.

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PRINTING INK VEHICLE CONTAINING CONJUNCT COPOLYMER DRYING OIL

A hydrocarbon-derived drying oil is the principal component of the varnish vehicle in this ink, useful in litho, typographic and intaglio printing. It air dries to a hard film, has enhanced flow characteristics, faster drying time, greater rub resistance and less penetration without loss of scratch resistance or tack. Patent 2,794,747 by Herman S. Bloch, assigned to Universal Oil Products Co.

NEWSPAPER STUFFING MACHINE

An impaler cooperates with the pocket of a stuffing machine so as to impale one-half of the jacket section and to hold such section open to facilitate insertion of the inner sections. The impaler has a pair of needles which are injected into jacket at intersecting angles so that the jacket is prevented from closing until needles are withdrawn. Patent 2,796,255 by John Mitchell, assigned to T. W. & C. B. Sheridan Co.

News ITEMS

Lawson Opens New Office—D. W. Schulkind, president, E. P. Lawson Co., has announced establishment of a Southeastern Div. with offices and showroom in Atlanta, Ga. Dealer arrangements, previously in effect, have been discontinued. The division includes North and South Carolina, Georgia, Florida, Alabama, Mississippi and Eastern Louisiana. John P. Lowery, who has transferred from the firm's headquarters in New York, N. Y., will be senior representative.

Executive Vice President—J. A. Keller has been elected executive vice president of Mergenthaler Linotype Co., it was announced recently by Martin M. Reed, president. Keller joined the organization in December, 1955, to become vice president of operation and a member of the board of directors.

HIGGASON

Frank Higgason will succeed C. Frank Mann as composing room superintendent of the Louisville (Ky.) *Courier-Journal* and the Louisville *Times*. He will take over on January 1, 1958 after Mann's retirement. Higgason has been manager of the Glasgow (Ky.) *Evening Journal* for four years.

Reginald Tranter, 59, a member of the staff of Charles T. Main, Inc., died recently in Wellesley Hills, Mass., following a long illness. He was a former mechanical superintendent of the Boston Herald and Traveler Corp., a former mechanical engineer with R. Hoe and Co. and assistant mechanical superintendent of the New York (N.Y.) *World*. He is survived by his wife, Nora, and three children.

BROWER

New Sales Office—Provision for expanded sales facilities for flexographic and gravure presses has been announced by Kidder Press, Boston. In cooperation with Gibbs-Brower Co., Inc., representative for Kidder slitters and rewinding equipment in eastern and midwestern areas, a Gibbs-Brower office will be opened in Madison, Wis. primarily for sales and servicing of Kidder products. John L. Brower, vice-president, Gibbs-Brower, will head the Madison office.

IPI Builds Modern Building—Interchemical Corporation, Printing Ink Div., has announced completion of a new structure for its Baltimore branch office and service station. The building is primarily of high grade brick, concrete and steel. Exterior features include ample parking space, depressed truck dock at one end, access to a railroad siding, and an ink tank storage farm of three 15,000 gal. units. The interior covers 13,000 sq. ft. and is equipped with the latest facilities for mixing, milling, color matching and proofing.

3
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New Office for Ideal Roller—The Milwaukee office of Ideal Roller & Mfg. Co. announces the acquisition of a new location at 4377 North Teutonia Ave.

New Corporation—The Star-Bulletin Printing Co., Honolulu, Hawaii, has been incorporated separately from but wholly owned by the Honolulu (Hawaii) *Star-Bulletin*, it was recently announced. Incorporation papers for the new firm were filed with the Territorial Treasurer in July, setting up the Star-Bulletin Printing Co. with a paid-in capital of $500 thousand. The firm begins business with a $250 thousand plant, which houses 17,000 sq. ft. of floor space. Officers and directors are as follows: P. L. McIlree, president; Riley H. Allen, vice president and secretary; Porter Dickinson, vice president; William H. Ewing, vice president and assistant secretary; A. K. Wong, vice president and treasurer; and Dean D. Sellers, general manager.

New International Department — Michael W. Huber, president, J. M. Huber Corp., has annaunced formation of a new international department to handle all foreign business.

SCHOENBURG LARA

Peter Schoenburg, at present director of export of the company, will head the department, which will be headquarterered in New York, N. Y. Louis A. Lara, general sales manager of Huber's Ink Div., has been named export sales manager.

Reuben B. Robertson, Jr., president of The Champion Paper and Fibre Company, has announced the promotion of Herbert W. Suter to senior vice president in charge of marketing. Robertson also announced the organization of a new division for the company, to be known as Champion Paper Sales Div. Suter, will become manager of this division. Other announcements are as follows: Henry W. Rigby has been named vice president in charge of corporate development; Karl R. Bendetsen, will become vice president in charge of operations; and Stephen B. Chase, Jr. will become vice president and manager of the Texas Division.

Production Superintendent — Promotion of Edward W. Deziel to production superintendent for lithographic products, printing products division has been announced by Minnesota Mining & Mfg. Co. Deziel assumes responsibility for the manufacture of presensitized lithographic plates at 3M's plant near Hastings, Minn. He was formerly process engineering supervisor.

Standard Register Promotions — Robert E. O'Connell, Edward A. Fiely, and Robert D. Turner have been named to key office positions for the Standard Register Co. at its new Midwest Division plant in Fayetteville, Ark. O'Connell has been appointed office supervisor, Fiely will be plant accountant, and Turner has been named buyer. O'Connell, a veteran of seventeen years with Standard, is presently manager of the order service dept. Fiely joined the company in 1951 in the cost and auditing depts. and has been internal auditor for the past year. Turner, who has been chief clerk in purchasing since 1954, has been with Standard for ten years.

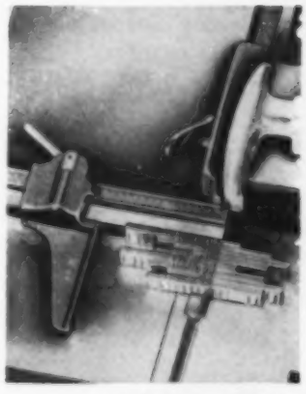
O'CONNELL FIELY TURNER

What Makes MORRISON Saw Trimmers TOPS in Time Saving?

Behind-the-Gauge Workholder Speeds up Cutting — Safely

With this radical workholder, you can clamp your material to position faster, more accurately, watch your cut more closely because the work is right at your finger tips. You move *only* the gauge and the material — not a heavy table. Behind-the-gauge frame makes slug fanning or jumping almost impossible, for greater safety.

Other Morrison extra-value features include: 75-Pica gauge, 135-pica swing-out extension gauge, both adjustable to points; miter and line-up gauge, right and left hand miter vise for face-up mitering, exclusive saw grinding attachment, and waste receptacle.



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For More Information Circle 127 on Reader Service Card

Ralph S. Roth, recently of the sales staff of Mergenthaler Linotype Co., has been appointed assistant to A. E. Rosene, mechanical superintendent, the St. Paul (Minn.) *Distpatch* and *Pioneer Press*. Roth is a graduate of Dartmouth and holds a master's degree in engineering and a degree in business administration.

Gravure Research Appointment—T. J. Stulz, treasurer, Parade Publications, Inc. has been appointed chairman of the steering committee of Gravure Research, Inc., it was announced by J. E. Hazel, president of the organization. Stulz is also president of Gravure Technical Assoc. It was also announced that Daniel Smith, director, Physics Research for Interchemical Corp., was appointed chairman of the technical advisory committee of Gravure Research. Two gravure companies recently elected to membership in GRI are Graphic Arts Corp. of Ohio, an active member, and Axel Springer & Sohn, Hamburg, Germany, as associate member.

Cyril Clay Cox, 63, Dallas, Tex., a veteran of more than 40 years in the newspaper field, died recently after a short illness. Cox was Southwestern representative for the Wood Flong Corp. and the Wood Newspaper Machinery Corp. Cox was formerly with Scripps-Howard Newspaper chain for 21 years. He is survived by his wife, Ruth, two sisters, and two brothers.

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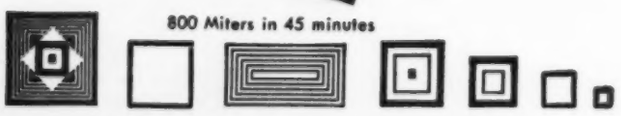

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BAND SAWS

For More Information Circle 152 on Reader Service Card

FELDKAMP

John H. Feldkamp has been promoted to Eastern Manager of the Geo. H. Morrill Co. Div., Sun Chemical Corp., it was announced by R. W. Dando, general manager of Morrill. Feldkamp joined Morrill in 1951: He has over 20 years of pressroom and sales experience in the newspaper field.

Newspaper Promotions — Edward Griesmeyer, according to Production Mgr. Harry Rindsberg, has been named night mechanical superintendent with complete charge of the composing room at the Cincinnati (O.) *Enquirer*. Joseph Budai, former composing room superintendent, resigned in June. Sidney Weiskittel, pressroom superintendent at the *Enquirer* for many years, retired on August 1. He has been succeeded by William Inskeep.

Electric Companies Combine — Edward E. Helm, president, Reliance Electric & Engineering Co., and Daniel T. Warner, president, Master Electric Co., have jointly announced that the combination of the two companies has received shareholder approval. The combined organization will have approx. a current annual sales volume of $95 million, total assets of $50 million, with 5800 employees and 6500 shareholders.

BURCHARD

Graphic Arts Consultant — Reuter & Bragdon, Inc., corporate public relations and advertising firm of Pittsburgh, Pa. and New York, N. Y., announces appointment of Kenneth R. Burchard as consultant in Graphic Arts. In this capacity Burchard will counsel clients of the firm's Graphic Arts Div. Burchard is professor of Printing Management and assistant dean of the School of Printing Management of the Carnegie Institute of Technology, Pittsburgh, Pa.

LNA Executive Director — Appointment of Oscar Whitehouse as executive director of the Lithographers National Assoc., Inc., was announced recently by Carl N. Reed, president. Whitehouse will succeeed W. Floyd Maxwell who is retiring after 24 years of active service to the association and the lithographic industry.

Ralph W. Stanley has been named director of work simplification of the Rust Craft Greeting Card Co.,

it was announced by E. Wrightson Christopher, president. Stanley former manager of the stock control preparation department, joined Rust Craft in 1945.

Executive Director—The Board of Directors of the Graphic Arts Assoc. of Wisconsin has announced the appointment of David W. Jones as executive director, effective Sept. 1. Jones joined the GAA staff in 1955 as employee relations director and is presently assistant executive director.

Davidson Promotions—W. C. Raftery, Texas sales representative of Davidson Corporation, has been appointed Los Angeles branch manager by W. W. Davidson, jr., executive vice president of the corporation. Raftery has over 30 years' experience in the

RAFTERY ORLANDO

printing and duplicating field. Davidson also announced the appointment of Nicholas Orlando, as sales manager of Davidson Corporation. Orlando joined the firm in 1956 as assistant to the executive vice president, in charge of field sales.

ATF Reports Earnings—Nine months' earnings of $1,691,298 before taxes were recently reported by American Type Founders Co., Inc. In addition, William W. Fisher, president, reported a decision by the manufacturer of printing presses and foundry type to hold present prices on the majority of its products, despite the recent increase in the cost of steel.

E. P. Lawson Co., a subsidiary of Miehle-Goss-Dexter, announced the addition of Arthur C. Davis to the firm's Eastern Sales Div. Davis has been assigned the New Jersey territory.

DAVIS RIGGS

Rochester Representative—Ideal Roller & Mfg. Co. recently announced that Charles E. Riggs will replace Henry Taylor as the firm's representative working out of the Rochester, N. Y. office.

Engraving Manager—Earle Teien has been named manager of engraving for the creative department of Brown & Bigelow, it was announced by T. J. Rurik, vice president. Teien, who joined Brown & Bigelow as a salesman in 1941, will have charge of developing the company's line of business greetings and deluxe engravings.

Turner Appointments—Dan Fisher, vice president, Turner Printing Machinery, Inc., has been appointed manager of the major equipment division of the Cleveland office. His new position will enable him to personally handle major equipment sales, especially in the field of buying and selling complete printing plants in

WILLIAMS SPERLING

operation. Also announced by Turner is the appointment of Carl F. Williams and Robert A. Sperling as vice presidents and co-managers of the Cleveland office.

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Seeing exactly what you are doing is the key to accurate, fast outlining and mortising. To get a clear, unobstructed view, the motor and drive of the Carlson Finisher are put *underneath* the table. Plates are placed face up with no locking or blocking needed. You see every line and have perfect control at all times. Work is easier and faster.

When outlining, the cutting tool is raised and the work is moved to the tool, making a perfect vertical cut. The first cut for mortises is pinpointed with the swing-up Locating Pin. The tool is raised through the plate and the mortise is quickly made. In both cases the chips adhere to the dead metal. Cuts right up to live material if necessary.

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Graphic Arts Meetings

(With Organization Name and Correspondence Officer)

American Photoengravers Assoc. — 1957 Conv., Bellevue-Stratford Hotel, Philadelphia, Oct. 14-16. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf.—1958 Conf. Chalfonte-Haddon Hall, Atlantic City, N. J., June 23-25. Mgr. Richard E. Lewis, ANPA Mechanical Dept., 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1957 Conv., Mount Washington Hotel, Bretton Woods, N. H., Sept. 23-25. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Educational Graphic Arts Exposition —Coliseum, New York, N. Y., Sept. 6-12, 1959. Gen. Mgr. A. E. Giegengack, 5600 Massachusetts Ave., N.W., Washington 16, D. C.

Fifth District Craftsmen's Conf. — Secy.-Treas. George W. Thompson, Toledo Colortype Co., 1711 Jefferson Ave., Toledo, O.

Graphic Arts Trade Assoc. Executives—1957 Meeting, Chicago, Ill., tentative dates Oct. 12-13. Secy.-Treas. Charles P. Hackett, Memphis Printing Industries, 215 Hickman Bldg., Memphis, Tenn.

Gravure Technical Assoc. — 1958 Conv., Hotel Commodore, New York, N. Y., Feb. 26-28. Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Mechanical Conf.—1958 Conf., Hotel Claypool, Indianapolis, Ind., Jan. 12-14. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf. —1957 Conf., Hotel Faust, Rockford, Ill., Sept. 28-29. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News.*

Intl. Assoc. Electrotypers & Stereotypers—1958 Conf., American Hotel, Bal Harbour, Fla., Oct. 21-24. Exec. Secy. Floyd C. Larson, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1958 Conv., Statler Hotel, Detroit, Mich., Aug. 10-13. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, O.

Intl. Graphic Arts Education Assoc. —Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—1958 Conv., Statler Hotel, Detroit, Mich. Secy. Francis J. Tominey, *New England Printer & Lithographer,* 470 Atlantic Ave., Boston 10, Mass.

Intl. Typographic Composition Assoc. — 1957 Conv., Hotel President, Kansas City, Mo., Sept. 18-21. Exec. Secy. W. E. Switzer, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conf.—Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—1957 Conf., Town House Hotel, Kansas City, Kans., Sept. 7-8. Kansas Secy.-Treas. Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy.-Treas. William A. Bray, Missouri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.— 1958 Conv., Arizona-Biltmore Hotel, Phoenix, Ariz., Apr. 28-May 1. Exec. Dir. Oscar Whitehouse, 381 Fourth Ave., New York 16, N. Y.

Mid-Atlantic Newspaper Mechanical Conf. — 1958 Conf., Penn-Sheraton Hotel, Pittsburgh, March 13-15. PNPA General Mgr. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assoc. of Litho Clubs—Exec. Secy. Eugene Hanson, 4440 Bessie St., St. Louis 15, Mo.

National Assoc. of Photo-Lithographers—1957 Conv., Chase-Park Plaza Hotel, St. Louis, Mo., Sept. 11-14. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

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National Paper Trade Assoc.—1957 Meeting, Conrad Hilton Hotel, Chicago, Sept. 16-18. Secy. J. H. Londergan, 220 E. 42nd St., New York 17, N. Y.

National Printing Equipment Assoc., Inc.—1957 Conf., Hotel Morrison, Chicago, Oct. 15-16. Secy. James E. Bennet, 140 Nassau St., New York 38.

National Safety Council Printing and Publishing Section—1957 Conf., Conrad Hilton Hotel, Chicago, Oct. 23-24. Staff Rep. Arthur Siedlecki, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Composing Room Executives Assoc. — Secy. Lewis R. Greene, Westerly (R.I.) *Sun*.

New England Newspaper Mechancal Conf.—1957 Conv., Hotel Statler, Boston, Mass., Oct. 19-20. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

New York State Capital District Mechanical Conf.—Dir. Floyd Laurenty, Albany (N. Y.) *Times-Union*.

Northwest Mechanical Conf. — 1958 Conf., Radisson Hotel, Minneapolis, Minn., Feb. 22-24. Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf., —Secy. Donald Newhouse, Prod. Mgr., The Portland (Ore.) *Oregonian*.

Kentucky Colonel — C. Frank Mann was recently advanced in rank when he received a commission as a Kentucky Colonel from Lieutenant Governor Harry Lee Waterfield of Kentucky. Pictured is the letter informing Mann of his appointment. Mann, who has been composing room superintendent of the Louisville (Ky.) *Courier-Journal* and the Louisville *Times* for years, will retire on January 1, 1958. He has been a familiar figure at numerous Graphic Arts conventions.

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OFFICE OF LIEUTENANT GOVERNOR
FRANKFORT
HARRY LEE WATERFIELD
LIEUTENANT GOVERNOR

July 5, 1957

Mr. C. Frank Mann
Courier-Journal and Times
Louisville, Kentucky

My dear Frank:

Under separate cover I am today mailing you a commission as a Kentucky Colonel.

I am happy to do this, and only hope you derive as much pleasure from having it as I got from issuing it.

With kindest personal regards and best wishes, I am,

Sincerely,

Harry Lee Waterfield
Lieutenant Governor

HLW:gmb

Packaging Institute Assoc. — 1957 Forum, Hotel Statler, New York, N. Y., Oct. 28-30. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1957 Annual Conv., Morrison Hotel, Chicago, Ill., Oct. 14-18. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Research and Engineering Council—1958 meeting, Edgewater Beach Hotel, Chicago, May 14-16. Managing Dir.

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Robert E. Rossell, 5728 Connecticut Ave. N.W., Washington 15, D.C.

ROP Color Conf.—1957 Conf., Sheraton Hotel, Chicago, Sept. 23-25. Secy. H. J. Prag, Room 520, 333 N. Michigan Ave., Chicago 1.

SNPA (Western Div.) Mechanical Conf.—1958 Conf., Hotel Mayo, Tulsa, Okla., Mar. 2-4. Secy. Walter Johnson, jr., P.O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc.—Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

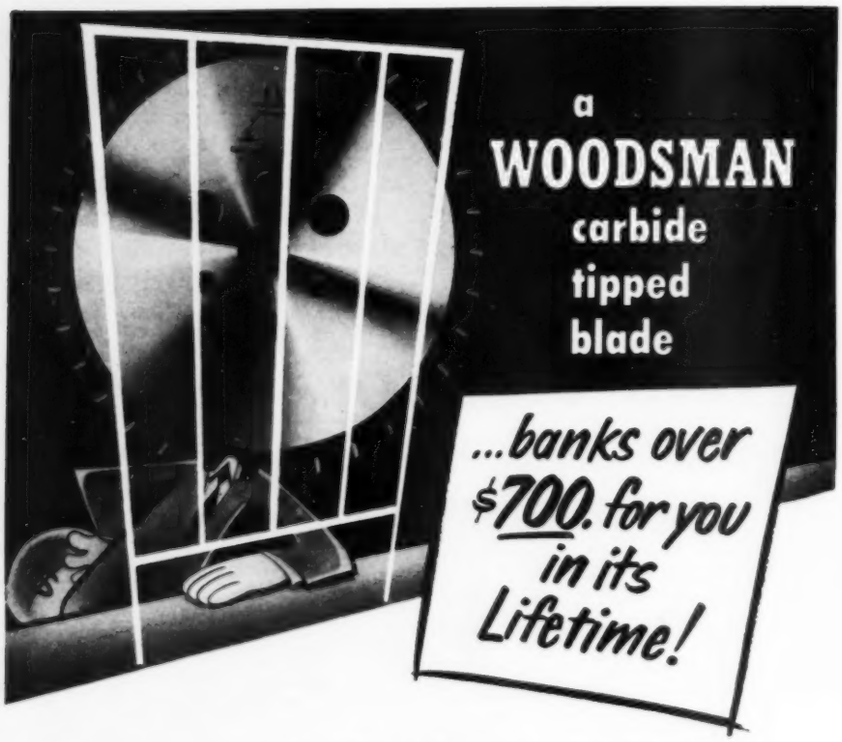
Screen Process Printing Assoc., Intl.—1957 Conf., Sheraton-Cadillac Hotel, Detroit Mich., Oct. 26-28. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

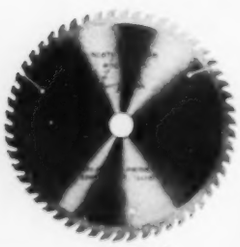
SNPA (Eastern Div.) Mechanical Conf.—1958 Conf., Dinkler-Plaza Hotel, Atlanta, Ga., Aug. 17-19. Secy. Grady M. Lemons, Southern Newspaper Publishers Assoc., P.O. Box 1569, Chattanooga 1, Tenn.

Technical Assoc. of the Graphic Arts—1958 Conv., Beverly-Hilton Hotel, Los Angeles, June 23-26. Secy.-Treas. B. L. Sites, Miehle Printing Press & Mfg. Co., 2011 W. Hastings St., Chicago 8.

GTA To Hold Forum

Designing the gravure package will be a major topic at the One-Day Forum of the Gravure Technical Assoc., to be held on Oct. 9 at the Hotel Commodore, New York, N. Y. In addition, the program will include other features of interest to packaging and publication members of GTA.





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Equipment Sales and Installations Reports

ATF Granted Army Contract

The Corps of Engineers, U.S. Army, has granted American Type Founders Co., Inc. a contract for approx. $500,000 for construction of light weight compact offset presses to be used in printing topographic maps and photomaps for military operations. The 22½ in. by 30 in. press is designed as a complete unit on a single base, for easy transportability. Incorporated are automatic facilities for paper feed, inking and dampening, printing, and delivery. Press was developed by ATF and specifications approved by the Departments of the Army, the Navy, and the Air Force, for use by the procurements services.

•

Linotype Spartan

The Raleight (N.C.) *News* and *Observer* and the Raleigh *Times* have adopted Linotype's 5½ pt. New Spartan Book with Heavy on 5½ pt. slugs for classified columns. The new sans serif face is designed for TTS composition on 11 picas from circuit agate transmission, notably sports scores, stock tables and

other financial material. At the time of changeover to New Spartan Book for classifieds, both newspapers also changed their body type to Linotype's 8 pt. Corona with Bold Face No. 2. Al Clem, (right) manager of the want ad department at the *News* and *Observer* and Raleigh *Times*, is pictured discussing the new faces with Ellis Speer, composing room superintendent.

•

Larger Linotype Face

The Philadelphia *Daily News* has changed its body type to Linotype's 9 pt. Ionic No. 5 on 10 pt. slugs. Column measure remains the same, 11½ picas. The 9 pt. face replaces a 7½ pt. type.

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ATF Installations

American Type Founders Co., Inc. reports the following installations:

ATF Chief 29 Offset Press—Precision Lithographing, Inc., New Hyde Park, N. Y., one press; Moe Zuckerman & Sons, New York, N. Y., one press; and Chelsea Litho Co., New York, N. Y., one press.

ATF Super Chief Offset Press—Passantino Printing Co., New York, N. Y., one press; Chelsea Litho Co., New York, N. Y., one press; and Leopold Boeker & Co., New York, N. Y., one press.

ATF Chief 15 Offset Press—Belcastro Brothers, Greenwich, Conn., one press; National Printing Co., Union, N. J., one press; Arthur Winters, New York, N. Y., one press; and L & L Printing Co., Belleville, N. J., one press.

Hoe Press Ordered

The Cleveland *Press* has announced an order for eight streamlined Hoe Color-Convertible press units to be installed in its new plant. These units will constitute the third press line for the *Press*, bringing its total to 44 Hoe units. Delivery is scheduled for mid-1958. Among the features of the press will be a new Hoe single delivery 3:2 folder with a pair of upper formers, an under-folder lead which will permit color location flexibility, and color cylinders for spot and full color printing.

•

Lawson Installations

The E. P. Lawson Co., a subsidiary of Miehle-Goss-Dexter, Inc. announced the following installations of its bindery equipment:

Series V-65 Hydraulic cushioned Clamp Electronic Spacer Cutter with air cushion device—R. J. Reynolds Tobacco Co., Winston-Salem, N. C.; Reliable Bindery, Chicago; E. P. Hoyer Co., Milwaukee, Wis., and Kingsport Press, Inc., Kingsport, Tenn.

Series B 3-knife Rapid Trimmer—Lithography by Hennage, Washington, D. C.; L. H. Jenkins, Inc., Richmond, Va.; Keystone Magazine Co., Wilkes-Barre,Pa.; Landes Bookbinding Corp., St. Louis, Mo.; Pacific Press Publishing Assoc., Mountain View, Calif.; and Kurt H. Volk, Inc., Bridgeport, Conn.

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Hantscho Press Ordered

The Middletown (N.Y.) *Daily Record* will install a Hantscho webfed lithographic press and supplementary equipment as part of the paper's expansion program, it was announced by the George Hantscho Co., Inc. The press is being manufactured to the *Record's* specifications at Hantscho's Mount Vernon, N.Y. plant and is scheduled for delivery on Oct. 15 of this year. The press will consist of two perfecting offset units, with a high speed folder, capable of producing 20,000 sections an hr. It will eliminate the present difficulties of collating the *Record*, which has been the newspaper's principal production problem. Press will cost $86.5 thousand, and a 25 h.p. Reliance motor, plus installation costs, will bring the total investment over the $100 thousand mark. The two special perfecting offset units on the press can be used to print one color on each side of one web simultaneously, blanket to blanket, or a total of two colors on each side of one web. Specially built folder is designed to produce a finished section of 16 pages, size 11¾ in. by 18 in., with greatly improved register.

Literature

(Continued from Page 24)

CHIEF OFFSET PRESS

A booklet descriptive of the AFT Chief 24 offset press has been relesed by American Type Founders. Press is equipped to handle 6 in. by 9 in., 8½ in. by 11 in. and 9 in. by 12 in. sheet sizes. Another feature is the 19-roller ink distribution system. Circle No. 325 on Reader Service Card.

WETTER FOLDER

Wetter rotary numbering machines are the subjects of a folder released by the Wetter Numbering Machine Co. Descriptions of the parallel rotary model and right-angle rotary are included. Circle No. 338 on Reader Service Card.

FORCE ROTARY HEADS

Wm. A. Force & Co., Inc. has issued an operating and maintenance manual regarding its rotary heads for high speed numbering. Heads are available in straight or convex styles for printing across the web or along the web. Circle No. 327 on Reader Service Card.

BRONZING MACHINE

Descriptive literature concerning the Dreissig bronzing machine Kombi 10 V is offered by Henry P. Korn. Machine is intended for use in tandem with printing presses and is equipped with four dusting off rollers, 10 dusting bands and 10 burnishers. Circle No. 339 on Reader Service Card.

Bindery

SEALSPRAY FOLDER

Sealspray, a liquid for spraying the beds of paper-cutting machines to prevent rust, is the subject of a two page folder issued by the Monogram Co. Other uses of Sealspray are also described. Included is an order blank. Circle No. 314 on Reader Service Card.

BRACKETT TRIMMER

Dexter Folder Co. is offering literature regarding the Dexter Brackett Trimmer. Machine is used to trim and cut apart labels, booklets, catalogs, and inserts. Circle No. 323 on Reader Service Card.

Miscellaneous

MAXWELL BOND

Samples of Maxwell Bond's six colors, four weights and six finishes are available from Howard Paper Mills, Inc., Maxwell Paper Co. Div. Circle No. 322 on Reader Service Card.

ALCOA SAMPLE

The Aluminum Co. of America is offering 4 in. samples of its abrasive tread plate. Abrasive particles are rolled into aluminum and are said to remain slip-proof even when wet, oily or greasy. Circle No. 337 on Reader Service Card.

CYCLOMATIC SYSTEM

East Chicago Machine Tool Corp.'s Cyclomatic System for automatic handling and baling of scrap paper at the rate of 4 T. per hr.

Special Service is routine with the Burgess representative

The Burgess representative is an experienced stereotyper. His travels take him into all types of plants with equipment and work of every description. He is at your service with valuable assistance. And he especially likes to help on those tough problems. His product—Burgess Mats—is top quality, too. Together, they make quite a team. Try them.

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of
Burgess Chrome and Supreme Tone-Tex Mats, Freeport, Illinois

BURGESS Chrome MATS

Canadian Representative, R. M. Lousen & Co., Ltd.,
Kennedy Road, Agincourt, Ontario

For More Information Circle 26 on Reader Service Card

is the subject of a 12 page bulletin now being offered. Illustrations are included. Circle No. 344 on Reader Service Card.

FRASER SAMPLE BOOK

To introduce its shade of White in Fraopaque, Fraser Paper, Ltd. is supplying merchant distributors with a sample book. Designed in triptych format, the three fold book is 6 in. by 9 in. in size. It presents the two available finishes, English and vellum and other information regarding the shade. Circle No. 317 on Reader Service Card.

ROUSE CATALOG

An illustrated catalog descriptive of Rouse Products has been prepared by H. B. Rouse and Co. Complete information is included. Circle No. 332 on Reader Service Card.

LETTERHEAD LIBRARY

Whiting-Plover Paper Co. has issued a permanized paper Letterhead Library, featuring the 12 grand award winners in the company's 1957 national letterhead competition. Purpose of the library is to show examples of excellent printing and design. Circle No. 318 on Reader Service Card.

LEWIS-SHEPARD BULLETIN

An eight page bulletin in which is described the recently introduced One Man Crew materials handling system is available from Lewis-Shepard Products, Inc. Included in the illustrated eight page circular are descriptions of the system, how it works and can be utilized, and its advantages. Circle No. 315 on Reader Service Card.

BAR-PLATE CATALOG

The Bar-Plate Manufacturing Co. has released a catalog listing its products for the Graphic Arts. Bar-Plate manufactures equipment for the printing, boxmaking, folding carton, and diecutting industries. Circle No. 345 on Reader Service Card.

AUTOMATIC LUBRICATION

A four page, two color bulletin entitled *The A.B.C. of Modern Lubrication* is offered by Bijur Lubricating Corp. Included in the bulletin are descriptions and illustrations of three basic elements of automatic lubrication —lubricators, distribution systems and Meter-Units. Eight types of automatic lubricators are shown. Circle No. 316 on Reader Service Card.

EASTERN CATALOG

Eastern Newspaper Supply, Inc. has published the Eastern Catalog 20, which contains illustrations and descriptions of over 500 items to meet practically every production need. Circle No. 333 on Reader Service Card.

STRAPPING MACHINE

The Model 12 automatic round steel strapping machine is the subject of a folder prepared by Gerrard Steel Strapping Div., United States Steel Corp. Also available is the *Blue Book of Packaging*, which contains full information on all USS Gerrard machines and round and flat strapping. Circle No. 326 on Reader Service Card.

MACBETH BULLETIN

A four page, two color bulletin regarding lighting for critical color proofing and viewing has been released by Macbeth Daylighting Corp. Descriptions of Macbeth lighting equipment, which artificially reproduces north sky daylight and horizon sunlight, are included. Fixture types and proper installation are also discussed. Circle No. 346 on Reader Service Card.

for the best impressions...

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CONTROLLED IMPRESSIONS
CLEAR IMPRESSIONS
SHARP IMPRESSIONS
plus
Controlled Gauge
Controlled Resiliency
Reduced Plate Wear
All Gauges For Your Press

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Cushion Cork—.050 to .085
Tingucork—.050 to .085 (A firmer cork)
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Foundation—.050 to .090 also—.032, .040 & .120
(The firm, oilproof base blanket)
Coated Felt—Gold Tympan D.S.
Plain Felt—Improved Satisfaction D.S.
Tingulok*—The fastest, surest method for applying blankets

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For More Information Circle 173 on Reader Service Card

books

Graphic Arts Procedures

The new revised edition of *Graphic Arts Procedures* by R. Randolph Karch is available. The original book has been put through four printings. At the outset, for those who have not been familiar with previous editions, we want to state that the latest

R. Randolph Karch is author of new edition of the book: *Graphic Arts Procedures*. He is well known throughout the printing industry.

edition has been brought up to date with respect to the major printing processes. It is not only designed for printing students but as a factual technical reference book for those who may have been associated with the printing industry for some time. It will be extremely useful also to artists, copywriters, advertising and business executives—this by way of a reference source. There are more than 257 illustrations explanatory of the text. In fact, the book may be considered a sort of encyclopedia regarding the fundamentals of printing.

In the book the letterpress, offset, gravure, silk screen and collotype processes are explained.

In the chapter entitled *How to Know the Various Type Faces* the different characteristics of types are explained as well as information about how to recognize type faces.

Other sections in the book deal with *How to Make Layouts, How to Set Type, How to Prepare Copy and Proofread, How to Lock Up and Impose Pages* and *How to Understand Letterpress Printing Plates.*

In the present state of education in the printing industry, perhaps one of the most valuable chapters is that entitled *How to Do Offset-Lithographic Printing,* both about platemaking and printing on the press.

Some of the other sections are entitled: *How to Do Letterpress Presswork, How to Understand Paper,* and *How to Understand Bindery Work.*

A total of 17 pages is devoted to definitions of special terms used in the printing industry. Then, too, there is an alphabetical index.

R. Randolph Karch is associated with the Dept. of Public Instruction, Commonwealth of Pennsylvania, Harrisburg. He is a well known figure in the industry. Formerly, he was technical supervisor, Dept. of Publishing and Printing, Rochester Institute of Technology.

Graphic Arts Procedures — By R. Randolph Karch; size 5⅝ in. by 8½ in., 384 pages; over 257 illustrations; bound in rusty cloth. Price per copy, $4.65 postpaid. May be ordered through *Printing Equipment Engineer.*

PIA Web Offset Meeting

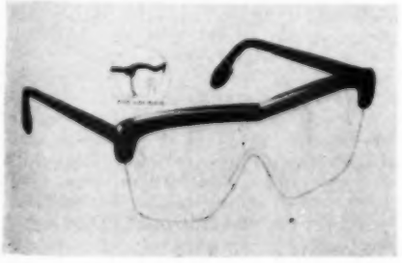
More than 130 persons attended the annual spring meeting of Web Offset Section of Printing Industry of America in June at the Westchester Country Club, Rye, N. Y. New officers elected were: Donald R. French, Danner Press of Canton, Inc., Canton, O., president; James N. Johnson, Standard Publishing Foundation, Cincinnati, O., vice president; R. E. Damon, Atlanta Lithograph Co., Atlanta, Ga., secretary; and Paul Lyle, Western Printing & Lithographing Co., Racine, Wis., treasurer. The executive committee of the section will next meet in Chicago during the PIA convention, Oct. 14-18.

Equipment and Supplies

(Continued from Page 20)

Plastic Eyeshield

An all plastic lightweight eyeshield has been introduced by the United States Safety Service Co. Called Spec, the eyeshield is said to be practical



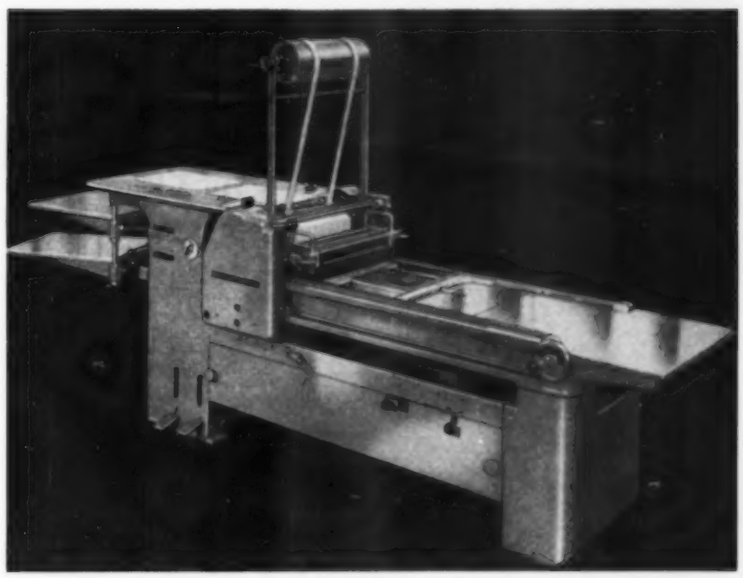
eye protection for plant visitors, supervisors, machine operators or any job requiring non-flammable and non-sparking eye protection. Two sizes, large and small, are available. Models with matching sideshields are equipped with the shields attached to the temple to permit folding flat. Plastic lens can be removed and replaced without tools. Circle No. 268 on Reader Service Card.

Challenge Filing Cabinets

For filing offset and duplicator plates or flats, drawings, artwork, photographs, and engravings, Challenge Machinery Co. announces the all-steel Challenge Filing Cabinet. Cabinets are 29 in. high overall and drawers are 25 in. wide, 22 in. long, and 1½ in. deep. Additional cabinets without top and base are available. Cabinet is finished in gray metallic

finish. Circle No. 258 on Reader Service Card.

Vandercook Power 219 *with Adjustable Bed and Automatic Tape Sheet Delivery. Maximum plate or form size 18" x 24". Maximum speed, 500 proofs per hour.*



Why Waste High Priced Operator Energy On A Crank Handle?

Fast and completely power operated, the Vandercook Power 219 will pay for itself by giving you more production and better quality! The Vandercook Power 219, when equipped with the new Automatic Tape Sheet Delivery which returns the printed sheet to the operator at the feed board, is the most efficient test press for the production of 1 to 1000 proofs of the finest quality. Trade in your hand driven proof presses on modern high speed Power 219's. Write for information.

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VANDERCOOK Pre-Press Equipment

For More Information Circle 182 on Reader Service Card

if you need a Hamilton imposing table...you're already paying for it!

How are you paying? Through your biggest overhead item—labor. How much are you paying? The cost of minutes inescapably wasted when compositors work on obsolete equipment.

Modern Hamilton imposing tables are self contained work areas with everything at the compositors' fingertips for faster and better work. Available in scores of different size-design-storage combinations, there's a Hamilton imposing table to fit your exact needs.

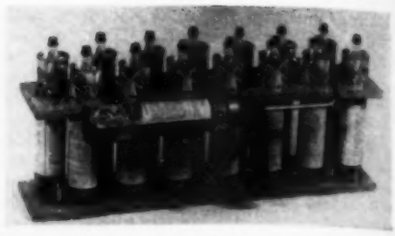
Next time you see your Hamilton dealer ask him about turning wasted composing room minutes into profitable production. You'll be surprised to learn that Hamilton imposing tables cost only a few cents per labor hour to purchase—a cost repaid over and over by increased hours actually on the job.

Hamilton

PRINTERS EQUIPMENT

HAMILTON MANUFACTURING COMPANY • TWO RIVERS, WISCONSIN

For More Information Circle 78 on Reader Service Card



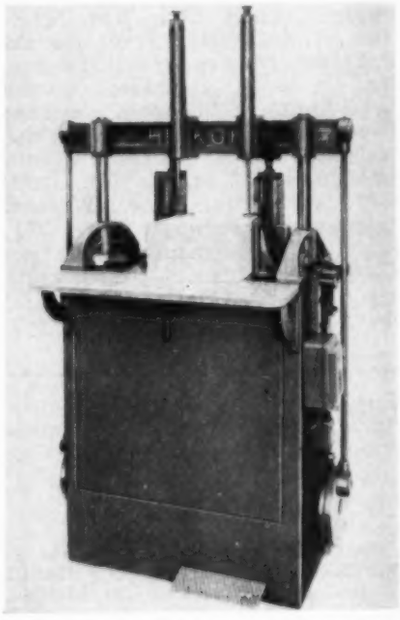
Ink Shelf for Cartridges—The Van Son Holland Ink Corp. of America announces an ink shelf. The shelf is designed to hold 14 cartridges of various inks. A holder for the Holland ink gun is also supplied. The shelf can either be fastened to a wall or placed on a table. Circle No. 274 on Reader Service Card.

Illustration Board

Bourges Color Corp. has released the Li-Nup bristol or illustration board with a non-photographic blue grid that enables measuring and positioning of copy. Non-photographic lines are at ⅛ in. interval, graduated to permit easier measure. The white surface is said to take pen and brush line work nicely. Size is 22 in. by 28 in. in either bristol or board. Circle No. 272 on Reader Service Card.

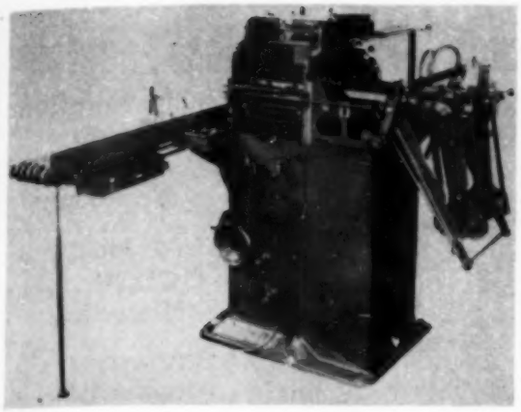
Duplex Corner Cutter

The W. O. Hickok Mfg. Co. has introduced a Duplex Corner Cutter for cutting two precision rounded corners at one time on paper or board. Ma-



chine can be used to cut up to 6 in. high and from 5 to 16 in. wide with precision by automatically self adjusting for variations in size of stock, up to ⅝ in. Standard equipment includes two knives and two dies of any radii from ⅛ in. to ¼ in. in increments of 1/16 in. Machine can also be equipped to cut diagonally straight corners up to 2 in. long. Cutter occupies 25 in. by 36½ in. of floor space. Circle No. 271 on Reader Service Card.

Try *Printing Equipment Engineer's* Classified Ads for quick results.

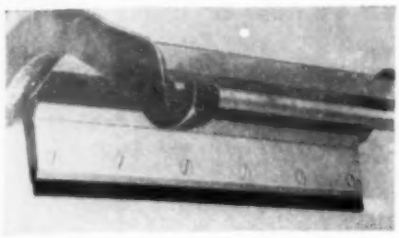


Casing-In Machine—Printing Industries Equipment, Inc. announces the Kolbus small automatic casing-in machine, designed for doing small books such as diaries, address books, etc. Operating speed is 35 books per min. Machine can be adjusted to various sizes and electrical circuit is designed so that the machine will stop automatically should anything go wrong. Covers are fed by suction feeder. Other features included are: electrically heated rounding apparatus; glue pots constructed so that fast setting synthetic glues and paste can be used as well as adhesives. Circle No. 256 on Reader Service Card.

18 in. or 24 in. arms and with two or three conductor cords having molded plugs. Circle No. 261 on Reader Service Card.

Multilith Clean-up Blade

A clean-up blade for 1250 Multiliths, which is said to help reduce washup time, and wear a minimum



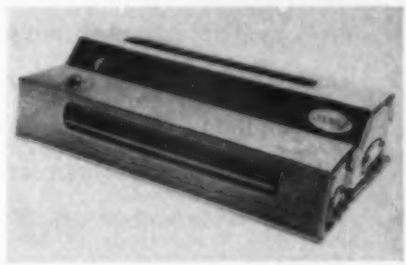
of three to five years under average operating conditions, has been introduced by Litho Research, Inc. Called Perma-Blade, the device is machined from a synthetic material said to be unaffected by chemicals and solvents found in washup and ink compounds. Circle No. 273 on Reader Service Card.

Moffatt Type Light

Moffatt Products, Inc. announces a type light, called Multi-Lamp, which is movable from one work area to another. Other features included are: Cool shade, industrial type switch, polyvinyl protection of the arm, recessed bulb lighting, 360 deg. ball bearing swivel, and inner aluminum reflector. Available with either

Photocopy Outfit

General Photo Products Co., Inc. announces the Genco ExactFax Duo, an outfit for making large photocopies up to 20 in. wide by any length. Outfit is said to be good for



copying large sketches, blueprints, etc., as well as for making letter

RUSSELL E. BAUM, INC.

WORLD'S FINEST FASTEST FOLDERS

FROM 14 x 20 TO 39 x 52

615 CHESTNUT ST., PHILA. 6, PA.

For More Information Circle 18 on Reader Service Card

UNIFORM INFRA-RED Pre-drying for High Shrinkage Mats

in the ALICO Evenray Mat Drier

USERS REPORT: Over 340 in use

- Type Sharper
- Halftones Clearer
- Greater depth of mould
- Plates wear longer
- Uniform drying
- Less drying time

. . . and new AUTOMATIC when equipped with DEVICE to feed and eject mats automatically

ALICO, Inc. MONTAGUE, MASS.

For More Information Circle 5 on Reader Service Card

ONE WAY to ruin a supper

—is to be forced to wait, beyond the supper hour, for the delivery of an afternoon paper—a paper expected to keep them abreast of some crucial happenings. . . . Papers, on the whole, get delivered with remarkable regularity. When they are late it may be due to mat trouble. The best safeguard is a mat whose makers are dedicated to uniformity, as is the case with Certified Dry Mats.

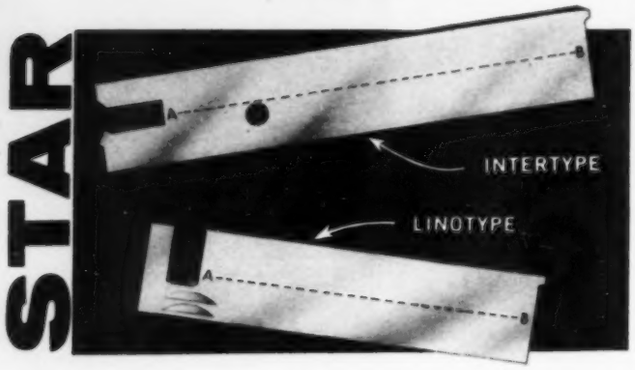
For dependable stereotyping rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 555 Fifth Avenue, Dept. M, New York 17, N. Y.

For More Information Circle 36 on Reader Service Card

ONLY STAR LINERS ARE RUSTPROOF



Because they are made of the finest stainless steel available for the purpose, Star Liners cannot rust or corrode. Liner loss, due to rusting or pitting, is reduced to zero.

Star Left Hand Liners are tapered (A-B) slightly from end to end. The casting end is .0005" to 0015" thicker to compensate for the warp found in most Mold Caps. This helps to prevent casting a fin on the end of the slug.

All sizes of Star Liners for 30 and 42 Pica Molds are available for immediate shipment. When you need Liners in a hurry, order Star Liners—they are stainless.

STAR LINER CUTTING GAUGE

. . . a new emergency tool that enables you to cut liners to emergency measures. Keep this gauge on hand as insurance against delays caused by calls for unexpected lengths of line. Order by STAR Part No. Z-127-L for Linotype liners and Z-127-I for Intertype liners, Z-127-S for the combination.

BRANCH:
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AGENCIES:
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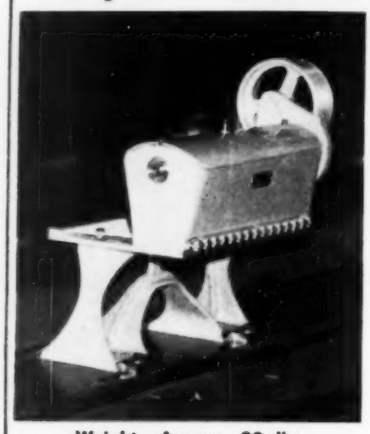
SO. ACTON, MASS.
CANADA: SEARS LTD.
AND AGENTS OVERSEAS

STAR PARTS, Inc.
Precision TRADE ★ MARK Parts
SOUTH HACKENSACK, N. J.

For More Information Circle 168 on Reader Service Card

"Capco" Portable Ink Fountain



Installation on late model Goss Headliner

- Provides COLOR efficiently
- Increases production—affords press-room savings up to 75%

Weight—Approx. 30 lbs.

- Saves time of pressmen—no costly installations
- Can be used on new or older equipment
- Easily operated and easily maintained

Let us tell you about the Many Other Features!

CAPITAL TOOL and Manufacturing Co.
5000 CALVERT RD. COLLEGE PARK, MD. UNion 4-7677

For More Information Circle 28 on Reader Service Card

PRINTED MATTER TIED The "SAXMAYER" way

Insures a Secure Package

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MODEL SRA-57

Both automatic and manually operated. Uses jute or sisal, single or cross-tie

Literature on request.

NATIONAL BUNDLE TYER COMPANY
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Blissfield, Michigan

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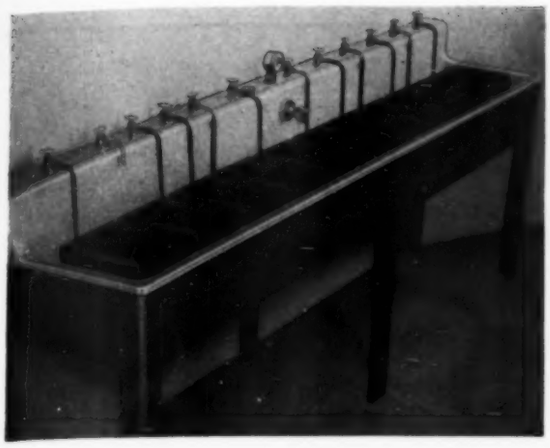
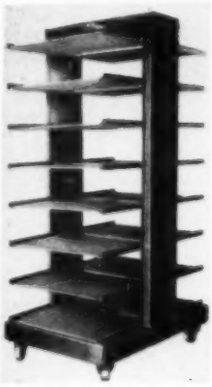


Color Processing Unit—Kreonite, Inc. announces an inline color process unit for 3½ gal. tank use. Featured in the unit are: Built in nitrogen burst agitation and temperature control. Size is 17 in. wide, 10 ft. long and 10 in. deep. Where dark room space is limited a smaller companion unit, the 17410, may be used in the dark room for first stages of the color process. Circle No. 265 on Reader Service Card.

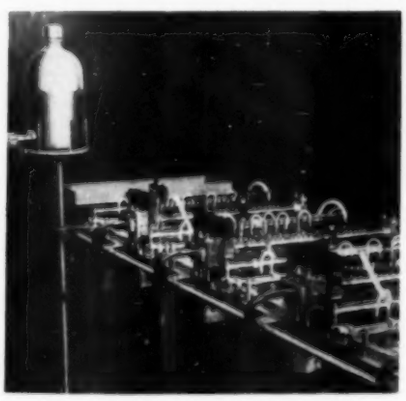
size copies. It consists of an automatic continuous printer with shutter type light control, and automatic continous processor. Outfit is used to make 60 to 90 one sided or two sided copies per hr. Operates on 110 v., a.c. Circle No. 267 on Reader Service Card.



Vertical Stock Racks — Challenge Machinery Co. has introduced vertical stock racks for handling stacks of paper in connection with printing, duplicating, collating or binding operations. Racks are portable and provide 30 to 40 sq. ft. of storage space. Two sizes are available: Model A with 20 by 27 in. of space on eacn level and Model B with 22 by 34 in. Circle No. 257 on Reader Service Card.

Central Glue System

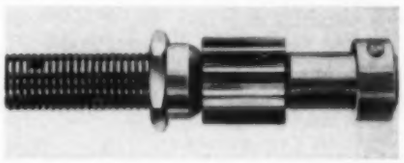
An improved central glue system, said to permit better glue control and allow use of heavier base glues,



has been introduced by Didde-Glaser, Inc., for use on Speed-Klect Collators. The system is operated by using a central glue supply reservoir. It is claimed to permit easier access to the Speed-Klect for paper adjustments and to reduce maintenance of the system. Circle No. 251 on Reader Service Card.

Driving Shaft Pinion

Star Parts, Inc. recently announced the Driving Shaft Pinion for Intertypes and Linotypes, said to enable simple removal and replacement of



this part from the driving shaft. The assembly is made up of the driving shaft pinion and nut. The nut is used, when replacement of the pinion is necessary, to force the main driving shaft off the driving pinion. Circle No. 252 on Reader Card.

Photomacrographic Camera

For use in examining any flat surface for quality control, Erdco Engineering Corp., in cooperation with Robert Ragan, Chicago Carton Co. has developed the Photomacrographic Camera. Camera is equipped with

coated and fully color corrected F 1.9 Raptar lens. The 4 in. by 5 in. image is flatter than the field of microscope and can be used to produce a 23 diameter enlargement of a 3/16 in. by ¼ in. field. It is possible to change from cut film to polaroid instantaneously. Camera can be used for routine inspections without taking pictures. Stereo pictures may also be taken. Circle No. 269 on Reader Service Card.

Tidland

PNEUMATIC SHAFTS

custom-engineered, collapsible, for winding, rewinding or unwinding rolls of any material. Proved savings for producers, printers and converters of papers, films, foils, rubber and fabrics.

▲ LEAF TYPE SHAFTS FOR WINDING

▲ LUG TYPE SHAFTS FOR UNWINDING

▲ SPECIAL SHAFTS FOR ANY SERVICE

SAVE SET-UP TIME. "Lug" type shaft for unwind eliminates chucks, and when used for rewind operation does away with spacer cores or collars; calibrated for quick, easy alignment of web. "Leaf" type for rewind with or without cores.

UNIFORM NON-SLIP GRIP. Four-way air expansion for positive non-slip gripping; centers shaft in core; eliminates core damage.

RELEASES INSTANTLY. A quick-release valve deflates air tube instantly. Collapsed Tidland Shaft slips out easily. No hammers, wedges or wrenches needed.

Get your Tidland Shafts from

CAMERON

the world's leading producer of slitting and winding equipment.

CAMERON MACHINE COMPANY
61 POPLAR STREET, BROOKLYN 1, N. Y.

Canada: Cameron Machine Company of Canada, Limited, Royal Bank Bldg., Toronto 1, Ont.

France: Batignolles-Chatillon, 5 Rue De Monttessuy, Paris (7e) France

For More Information Circle 206 on Reader Service Card

Alike As Identical Twins, BUT What a Difference in Personality:

● It's true, mats may look alike, but when you use them you discover their true personality. They perform vastly different. Quality-wise you can't beat the personality that is the reproduction and printing results, attained with Beveridge Mats. Ask for Paramount or Hi-Cushion for syndicate work—Hi-Speed or Multi-Cast for the newspaper field. Don't trust look-a-likes, specify Beveridge, the mat with the quality personality.

New Products Division
BEVERIDGE PAPER CO.
Indianapolis 4, Indiana

For More Information Circle 20 on Reader Service Card

Silicone Cleaning Material

A non-woven rayon wiping and polishing material has been introduced by Edmund Scientific Co. The silicone treated material is said to impart a protective, odorless, non-oily non-greasy coating to highly finished glass, plastic and metals. Size is 16 in. by 18 in. Circle No. 258 on Reader Service Card.

Cut Press Time

(Continued from Page 33)

number of applications where electronics now permit the required precise control.

Electronics in Letterpress

Most of Tracht's talk centered on the use of electronic engravings which he said are now being used by more than 7000 newspaper publishers, commercial and publication printers. He claimed, on the press, electronic engravings require less makeready and deliver long runs. He related that Leland Smith, Commercial Printing Co., Pine Bluff, Ark., reported recently after a run of 158,000 impressions printing directly from Fairchild plates mounted on nickelplated stereotypes, he detected no deterioration of quality.

The speaker predicted greater use of electronics in the printing industry. He said electronic color scanners will supply the printer with color corrected plates direct from the original. There will also be color scanners which will supply the photoengraver or platemaker with color corrected screened negatives for exposure directly to various metals or other engraving materials. These scanners, he added, will supply screened negatives in three, four, or perhaps even more colors.

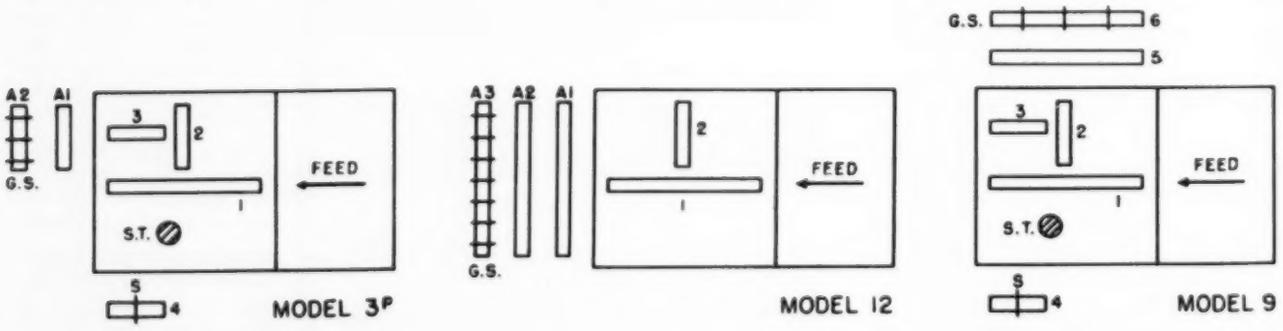
Live Demonstrations

The live demonstrations then got under way with Mellick providing a running commentary of the operations taking place. A three-color process job consisting of two different subjects was run in front of the audience. It included a demonstration of the use of 3M makeready. Mellick commented: ". . . three-color process in either letterpress or offset is not a substitute for four-color printing. It will permit your customers to produce work in color which previously might have been done in black and white or two-color printing."

The pressroom, said the moderator, is the most expensive cost center in plants today. Yet, he added, all too much adjustment and registration is done in this department. He offered some suggestions for reducing makeready time as follows: Don't makeready the press; don't over-makeready; check materials (slugs, foundry type, engravings, electros) for height accuracy, also body thickness and accuracy of end cuts; make sure certain materials (ink, paper, rollers) are compatible to the job; don't use the press as an imposing table; investigate new items which will substantially reduce makeready time.

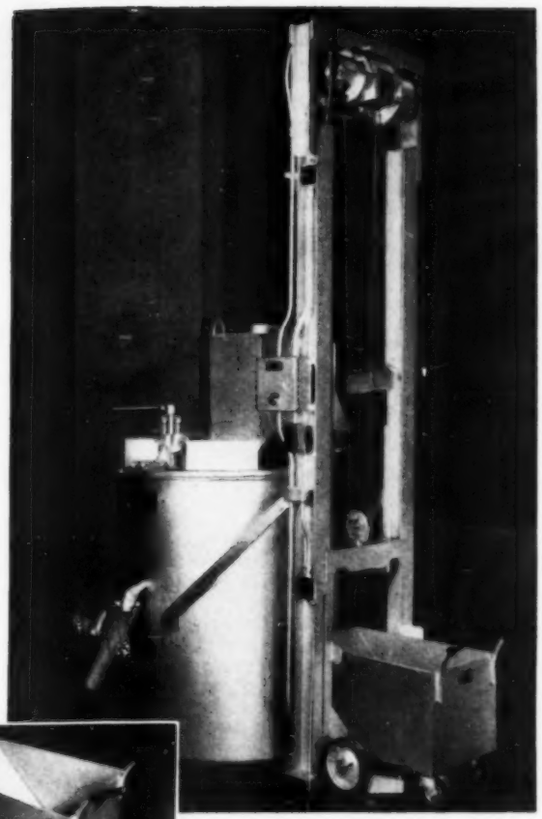
A series of demonstrations followed the three-color run. Included were press runs using Fairchild engravings, magnesium and rubber plates; making a plate on the Fairchild Scan-A-Sizer; and printing two-up, perforating, numbering, scoring and imprinting in one operation. All were designed to show the economies available to the letterpress printer.

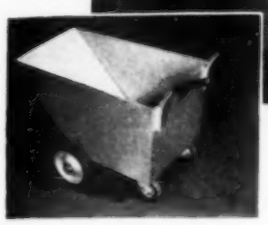
In one demonstration, the specialists showed how printing and tipping of business forms work could be done on the press in one operation. It was made possible through a device invented by Charles Patterson, Tri-Arts Press, Madison, Wis. The development of the National Cash Register paper, which does not require interleaved carbon, makes this device practical. Sheets of NCR paper are first gathered into sets (white, yellow, blue, pink, etc.) and printed



ATF Cameo Folders

Large sheet 52 in. by 76 in. knife folding machines for work printed on the 76 in. rotary letterpress and offset presses have been announced by American Type Founders Co., Inc. Machines are offered in three separate models to meet plant needs for flexibility in folding. Fold roller layout diagrams of Model 3P, Model 12, and Model 9 are shown above. Model 12 will produce either four 6½ in. by 9½ in. 32 page signatures, or eight 6½ in. by 9½ in. 16 page signatures. Model 3P will produce four 6½ by 9½ in. 32 page signatures and also a set of parallel 9½ in. by 13 in. 32 page signatures from a full 52 in. by 76 in. sheet. Four 9½ in. by 13 in. 16 page signatures can be produced from the same sheet on Model 9. The same models are available in 36 in. by 48 in., 46 in. by 56 in., 46 in. by 62 in., and 46 in. by 72 in. maximum sheet sizes. Use of folders is said to eliminate large sheet binding problems. The 76 in. sheets for book and similar signature work are printed work and turn and then slit in half or cut to fold as two 38 in. by 52 in. sheets. Additional fold rollers may be added to the machines. Circle No. 250 on Reader Service Card.





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in normal fashion on the Miehle Vertical. At the delivery end of the press, the sheets are tipped after printing and are ready to be wrapped and shipped. The tipping unit may be operated for sets of two, three, four, six, eight or twelve copies.

Composing Discussions

(Continued from Page 35)

process must include methods for reducing the cost of these necessary operations. The use of punched tape, magnetic tape, microfilm and other high-speed data processing techniques should provide opportunities to reduce make-up and proofreading requirements."

The Linofilm Composer

George A. Boucher, production planning engineer, Mergenthaler Linotype Co., spoke on *The Linofilm System*. After describing the Linofilm equipment (see page 44, *Printing Equipment Engineer*, July 1956) he discussed the Linofilm Composer which is the fourth piece of equipment in the Linofilm System. He said the composer is used to perform two basic functions—makeup and the enlarging or reducing of type. The composer takes film from the Linofilm photographic unit and provides black type on clear film or white paper in sizes ranging from 3 pts. up to and including 108 pts., positioned exactly as demanded by the layout. The operator sits facing the viewing screen which is at eye level. Operation of the composer consists of positioning and bringing to size the line which is projected on the screen as required by the layout. After pressing the *start* button the line disappears from the screen and is photographed in exact position on the output material. The next line then moves up simultaneously with the layout and is projected on the screen. These steps are repeated for each line in the job at speeds up to 12 lines per min. The composer permits reduction by a third or magnification of six times to obtain the type range of 12 pts. to 108 pts. The capacity of the fully made up job is 16 in. by 200 in. on film or paper ready for the insertion of illustrations and art work.

User's Experience with Fotosetter

User's Actual Experience with Fotosetter was discussed by Jack L. Goldstein, Typographic Service, Inc., Philadelphia. Goldstein related that Typographic Service's photocomposition plant contains over 10,000 sq. ft. of floor space.

He stated that for many years his firm had been watching more and more work go from foundry or press lockup to reproduction proofing. "Today," he said, "about 75% of our typesetting is for reproduction proofs. Proofs go to the artist or art service to make mechanicals for offset or gravure printing." In 1949 his firm began film composition with the Hadego and a few fonts of type consisting of negative alphabets. Today the firm is operating around the clock with four Fotosetters, a Hadego, Filmotype, Protype and two Fotomaster cameras. All but the Fotosetter equipment is used primarily for display composition.

In his plant, typographic layout is prepared on translucent tissue for subsequent use in makeup. Type scaling and fit computations must be accurate. Copy is properly marked up for use by the phototypographer. Visuals are needed only to satisfy the customer and/or to show the printer what is expected of him.

Proofs available from film positives are paper autopositives which are easily and cheaply produced by direct contact. Galley and page proofs are both easily produced. Glossy photo prints require making

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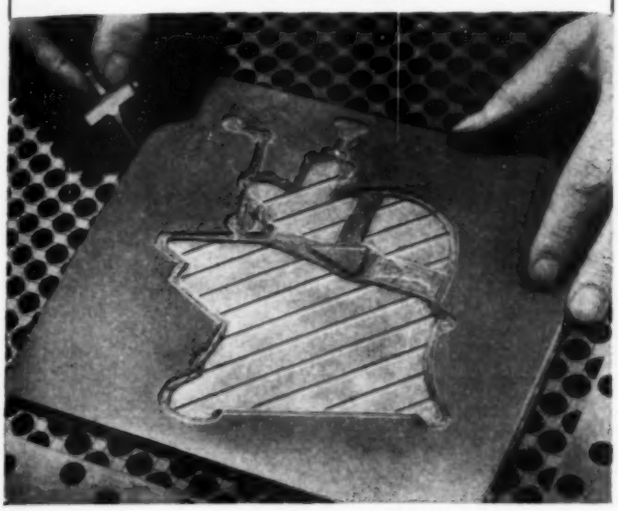

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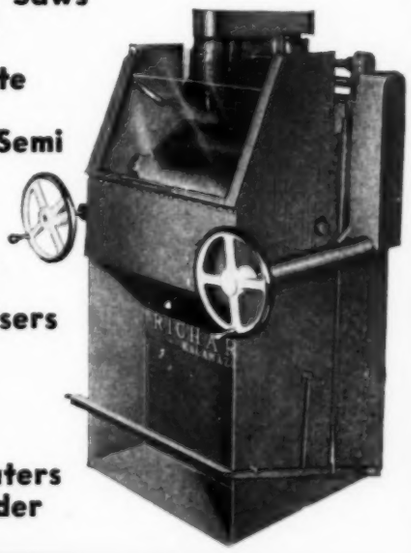

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film negative prior to exposure on photocopy paper.

"The successful use of phototypographic processes hinges on execution of properly planned operations," he said.

"The newer platemaking techniques for conventional processes and dry offset," he stated, "have put the letterpress printer back into active competition in categories of work he lost to the lithographer."

Commercial Teletypesetter Operations

Oscar Hoffman, president, Superior Typesetting Co., St. Louis, Mo., spoke on *Experiences with Teletypesetter.*

Hoffman stated: "We have five perforating or keyboard units and two Model 5 and two Comets with Teletypesetter operating units. The two Comets are fitted with hydraulic quadders that can be operated from the tape perforators for centering lines or for flush right or flush left composition. Short lines are not spaced out on the keyboard.

"All four slug casting machines," he continued, "have electronic matrix detectors. This is an electric eye device positioned at one side of the lower end of the matrix magazine. This electric eye keeps the assembled matrix line from elevating to the delivery slide if a matrix fails to fall into the line while the line is being assembled. After a stoppage, the monitor of the slug casting machine can then read the matrix line, correct it and find the cause of the trouble."

Hoffman enumerated the advantages of Teletypesetter equipment. These are: Increased production over the manually operated machine; first, because operators have very few mechanical worries where in manual operation the operator has to watch the metal pot heat, matrix assembly, matrix distribution, slug ejection and the taking of type off the galleys. The steady and continuous running of slug casting machines permits a lower temperature in the metal pot and mouthpiece which in turn provides a better slug.

While it is a dual operation, the production of the Teletypesetter keyboard in the Superior plant is from 50% to 75% greater than it is from the manually operated machines.

Hoffman stated that among the problems associated with Teletypesetter operation was the securing of inexperienced operators. Manual slug casting machine operators do not want to monitor Teletypesetter operated machines because they claim they lose their touch for operating the regular slug casting keyboard.

The speaker explained that corrections used to be a real problem in the Superior typesetting plant when made manually. There was a natural opposition to Teletypesetter composition in the slug machine department so it can be seen why the corrections took so much time. Of all corrections to be made, no more than 10% to 15% of these corrections are the keyboard operators' fault, so the corrections are now set on the Teletypesetter keyboard, taking at least 20 to 30 galley proofs at a time, thus cutting down the correction time materially.

The speaker observed that the speed of the Teletypesetter operated machines in his plant ranges from 7 to 9 lines per min. Alternate molds are used in the mold disk. Air-cooled molds are essential to successful Teletypesetter operation.

Type Modifications by Camera

James E. Shaw, president, Buffalo Type Service Corp., Buffalo, N. Y., spoke on *Type Modifications by Camera Techniques.* Through the use of many slides he spoke of the modification of type work done in his plant with Modigraphic camera equipment. Comparison by means of slides showed original composition in comparison with the modification of type.

Shaw discussed at some length the tapering of a type line in perspective so that all of the letters in receding perspective would be of the same weight instead of changing character thickness as the design receded. In producing a constant weight of letter in a perspective line sometimes it is necessary to take a number of shots of the line progressively with some handwork, which makes the cost of the job prohibitive. He observed rather dryly: "In some cases there is nothing left to pay the rent for what we get for such a job." He expressed it as his opinion that maybe the customer ought to hand letter such lines rather than to try to reproduce tapered lines photographically.

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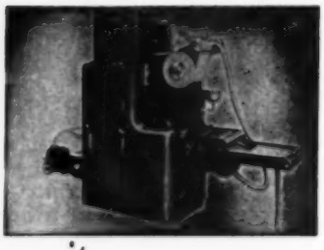

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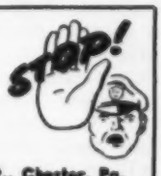

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HOW TO ADJUST WORK-UPS

By Wm. H. Lichter and Geo. F. Smalley

This 24-page booklet analyzes causes of work-ups and gives proper procedure for locking up forms.

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One Man Handles Remelting—Metal remelting in the Des Moines (Iowa) *Register* and *Tribune* stereotype room after installation of a Nolan 5 T. Remelt Furnace and Meltevator is now handled by one man in one shift. Shown is Albert Belluchi, maintenance man at the *Register* and *Tribune*, as he controls the Nolan metal pouring spout in casting metal pouring from Nolan Remelter into 16 cavity, water-cooled Nolan ingot molds. The Meltevator is an automatic pot loading device adaptable to gas and electrically heated furnaces.

Presensitized Plates

(Continued from Page 51)

Sometimes it can be due to using a solvent which softens the image area (the lacquer on top of the diazo compound). Find out from the plate manufacturer which solvent has that effect on his plates, and then don't use that type of solvent. In most cases it is just due to wear on the image areas. In all cases, and with proper care and reprocessing, there is no reason why 200 thousand to 300 thousand cannot be obtained with presensitized plates.

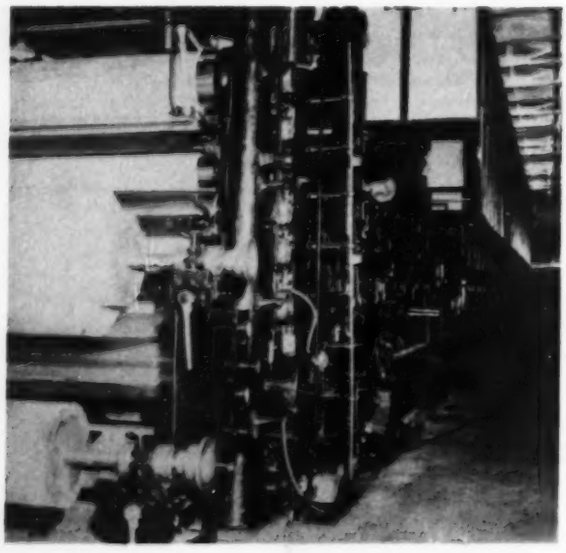
When we have such plates as are described here, what do we expect from them? We stated at the start of this discussion that we were interested in a good offset printing plate. We think we have what we are looking for in this type of inexpensive surface plates. However, we can get the same result (we don't think any better) with the expensive bi and tri-metallic printing plates.

To be honest in our appraisal regarding presensitized plates, industry has accepted them. However, to do the job we expect from them, they must be processed correctly as the manufacturers recommend and, furthermore, the press must be set correctly.

When the press is set with too much pressure and bouncing rollers, hard blanket and the fountain etch is too strong, any plate (albumin, deep etch plate, bi or tri-metallic including a presensitized plate, will wear out quickly. But if the plate is processed properly and the press is set as it should be, presensitized plates will give a very good account of themselves.

The present lacquer surface on the presensitized plates is very thin. Even if properly protected, it will wear off rather quickly. But be assured that the different manufacturers of presensitized plates are working hard to find a more substantial surface than they have already.

(To Be Continued)



New Fourdrinier Machine is in production at the Lock Haven, Pa., mill of New York & Pennsylvania Co., Gibson P. Stouck, manager of the Lock Haven Div. announced recently. The machine is a 108 in. Beloit with a top daily capacity of 100,000 lbs. Equipped with Beloit tub press, it is scheduled principally for production of offset and other surface sized grades. Shown is the first reel of paper turned out on the Fourdrinier.

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SEPTEMBER 1957

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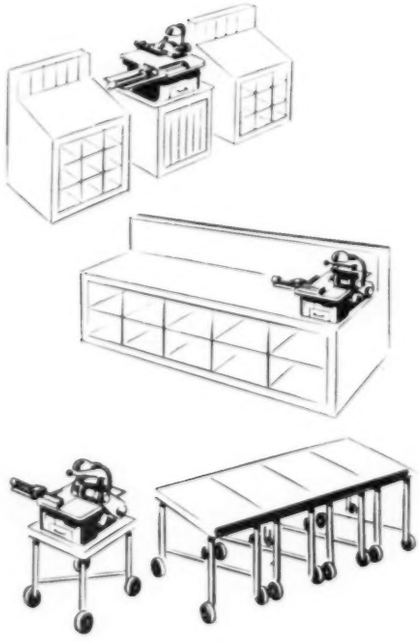

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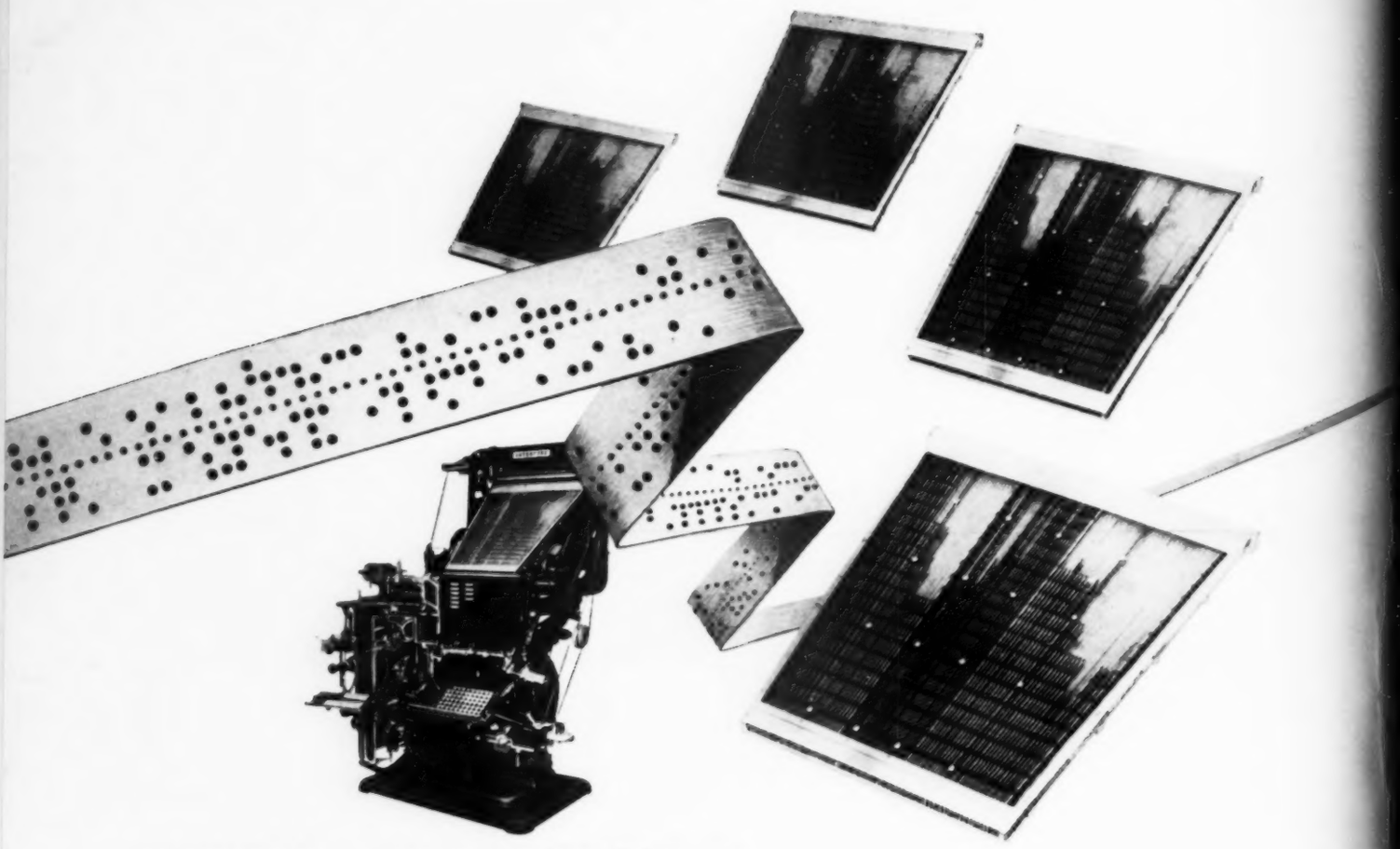

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